HDR-HC1/HC1E/HC1K/HC1EK

RMT-831

SERVICE MANUAL

LEVEL 2

Ver 1.0 2005.06
Revision History

How to use
Acrobat Reader

US Model
Canadian Model
AEP Model
UK Model
North European Model
E Model
Australian Model
Chinese Model
Korea Model
Tourist Model
Japanese Model

Photo: HDR-HC1E

N MECHANISM (MDX-N102)

Link

SPECIFICATIONS	DISASSEMBLY	SCHEMATIC DIAGRAMS
MODEL INFORMATION TABLE	BLOCK DIAGRAMS	PRINTED WIRING BOARDS
SERVICE NOTE	FRAME SCHEMATIC DIAGRAMS	REPAIR PARTS LIST

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Mini DV Digital Video Cassette

DIGITAL HD VIDEO CAMERA RECORDER

SONY

HDR-HC1/HC1E/HC1K/HC1EK_L2
9-876-883-31

Sony EMCS Co.

2005F0500-1
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Published by DI Technical Support Department

These specifications are extracted from instruction manual of HDR-HC1.

ENGLISH | JAPANESE

Self Diagnosis Supported model

HANDYCAM

HDV HDV 1080i

MEMORY STICK ™

InfoLITHIUM M SERIES

SPECIFICATIONS

System

Video recording system (HDV)	2 rotary heads, Helical scanning system
Video recording system (DV)	2 rotary heads, Helical scanning system
Still image recording system	Exif Ver. 2.2*1
Audio recording system (HDV)	Rotary heads, MPEG-1 Audio Layer -2, Quantization: 16 bits (Fs 48 kHz, stereo) transfer rate: 384 kbps
Audio recording system (DV)	Rotary heads, PCM system Quantization: 12 bits (Fs 32 kHz, stereo 1, stereo 2), 16 bits (Fs 48 kHz, stereo)
Video signal	NTSC color, EIA standards 1080/60i specification
Usable cassette	Mini DV cassette with the Mini DV mark printed
Tape speed (HDV)	Approx. 18.81 mm/s
Tape speed (DV)	SP: Approx. 18.81 mm/s LP: Approx. 12.56 mm/s
Recording/ playback time (HDV)	60 min (using a DVM60 cassette)
Recording/ playback time (DV)	SP: 60 min (using a DVM60 cassette) LP: 90 min (using a DVM60 cassette)
Fast forward/ rewind time	Approx. 2 min 40 s (using a DVM60 cassette and rechargeable battery pack) Approx. 1 min 45 s (using a DVM60 cassette and AC Adaptor)
Viewfinder	Electric viewfinder (color)
Image device	5.9 mm (1/3 type) CMOS sensor Gross: Approx. 2 969 000 pixels Effective (movie, 4:3): 1 486 000 pixels Effective (movie, 16:9): 1 983 000 pixels Effective (still, 4:3): 2 764 800 pixels Effective (still, 16:9): 2 073 600 pixels
Lens	Carl Zeiss Vario-Sonnar T* 10 × (Optical), 120 × (Digital)
Focal length	f=5.1 ~ 51 mm (7/32 ~ 2 1/8 in.) When converted to a 35 mm still camera In CAMERA-TAPE *2: 41 ~ 480 mm (1 5/8 ~ 19 in.) (16:9), 50 ~ 590 mm (2 ~ 23 1/4 in.) (4:3) In CAMERA-MEMORY: 37 ~ 370 mm (1 1/2 ~ 14 5/8 in.) (4:3), 40 ~ 400 mm (1 5/8 ~ 15 3/4 in.) (16:9)
	F1.8 ~ 2.1 Filter diameter: 37 mm (1 1/2 in.)
Color temperature	[AUTO], [ONE PUSH], [INDOOR] (3 200 K), [OUTDOOR] (5 800 K)
Minimum illumination	7 1x (lux) (F 1.8) 0 lx (lux) (during NightShot function)*3

*1 "Exif" is a file format for still images, established by the JEITA (Japan Electronics and Information Technology Industries Association). Files in this format can have additional information such as your camcorder's setting information at the time of recording.

*2 The focal length figures are actual figures resulting from wide angle pixel read-out.

*3 Objects unable to be seen due to the dark can be shot with infrared lighting.

Output connectors

Audio/Video output	10-pin connector Video signal: 1 Vp-p, 75 Ω (ohms), unbalanced Luminance signal: 1 Vp-p, 75 Ω (ohms), unbalanced Chrominance signal: 0.286 Vp-p, 75 Ω (ohms), unbalanced Audio signal: 327 mV (at output impedance more than 47 kΩ (kilohms)), Output impedance with less than 2.2 kΩ (kilohms)
COMPONENT OUT jack	Y:1 Vp-p, 75 Ω (ohms), unbalanced P_B/P_R, C_B/C_R: +/- 350 mVp-p
Headphones jack	Stereo minijack (Ø 3.5)

Input/Output connectors

MIC jack	Minijack, 0.388 mV low impedance with DC 2.5 to 3.0 V, output impedance 6.8 kΩ (kilohms) (Ø 3.5 mm), Stereo type
LANC jack	Stereo mini-minijack (Ø 2.5 mm)
USB jack	mini-B
i.LINK HDV/DV jack	i.LINK Interface (IEEE 1394, 4-pin connector S100)

LCD screen

Picture	6.9 cm (2.7 type, aspect ratio 16:9)
Total dot number	123 200 (560 × 220)

General

Power requirements	DC 7.2 V (battery pack) DC 8.4 V (AC Adaptor)
Average power consumption (when using the battery pack)	During camera recording using the viewfinder with normal brightness: HDV recording 5.8 W DV recording 5.2 W During camera recording using the LCD with normal brightness: HDV recording 5.9 W DV recording 5.3 W
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to + 60 °C (-4 °F to + 140 °F)
Dimensions (approx.)	71 × 94 × 188 mm (2 7/8 × 3 3/4 × 7 1/2 in.) (w/h/d) excluding the projecting parts
Mass (approx.)	680 g (1lb7oz) main unit only 780 g (1lb11oz) including the NP-FM50 rechargeable battery pack, DVM60 cassette and lens cap.
Supplied accessories	"Memory Sick Duo" 16MB (1) Memory Stick Duo adaptor (1) AC Adaptor (1) Power cord (1) Lens cap (1) Lens hood (1) Wireless Remote Commander (1) A/V connecting cable (1) Component video cable (1) USB cable (1) Shoulder Strap (1) Rechargeable battery pack NP-FM50 (1) Operating Guide (1)

See page 5-41.

AC Adaptor AC-L15A/L15B

Power requirements	AC 100 - 240 V, 50/60 Hz
Current consumption	0.35 - 0.18 A
Power consumption	18 W
Output voltage	DC 8.4 V*
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to + 60 °C (-4 °F to + 140 °F)
Dimensions (approx.)	56 × 31 × 100 mm (2 1/4 × 1 1/4 × 4 in.) (w/h/d) excluding the projecting parts
Mass (approx.)	190 g (6.7 oz) main unit only

* See the label on the AC Adaptor for other specifications.

Rechargeable battery pack (NP-FM50)

Maximum output voltage	DC 8.4 V
Output voltage	DC 7.2 V
Capacity	8.5 Wh (1 180 mAh)
Dimensions (approx.)	38.2 × 20.5 × 55.6 mm (1 9/16 × 13/16 × 2 1/4 in.) (w/h/d)
Mass (approx.)	76 g (2.7 oz)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Type	Lithium ion

Design and specifications are subject to change without notice.

自己診断搭載機種 HANDYCAM HDV HDV 1080i MEMORY STICK InfoLITHIUM M SERIES

概略仕様

システム

録画方式（HDV）	回転２ヘッドヘリカルスキャン
録画方式（DV）	回転２ヘッドヘリカルスキャン
静止画記録方式[*1]	Exif Ver.2.2
録音方式（HDV）	回転ヘッド MPEG-1 Audio Layer2 16ビット48kHz（ステレオ） 転送レート384kbps
録音方式（DV）	回転ヘッド 12ビット32kHz （ステレオ1、ステレオ2） 16ビット、48kHz（ステレオ）
映像信号	NTSCカラー、EIA標準方式、1080/60i方式
使用可能カセット	Mini DV Digital Video Cassette マークのついたミニDVカセット
テープ速度（HDV）	約18.81mm/秒
テープ速度（DV）	SP：約18.81mm/秒 LP：約12.56mm/秒
録画/再生時間（HDV）	60分（DVM60使用時）
録画/再生時間（DV）	SP：60分（DVM60使用時） LP：90分（DVM60使用時）
早送り、巻き戻し時間	バッテリー使用時： 約2分40秒（DVM60使用時） ACアダプター使用時： 約1分45秒（DVM60使用時）
ファインダー	電子ファインダー：カラー
撮像素子	5.9mm（1/3型）CMOSセンサー 総画素数：約297万画素 動画時有効画素数（4：3モード):約149 万画素 動画時有効画素数（16：9モード）：約198 万画素 静止画時有効画素数（4：3モード）：約276万画素 静止画時有効画素数（16：9モード）：約207万画素
ズームレンズ	カールツァイス　バリオゾナーT* 10倍（光学）、120倍（デジタル） f=5.1 ～ 51mm 35mmカメラ換算では 「撮る－テープ」時[*2]： 41 ～ 480mm（16：9モード） （4：3モードでは50 ～ 590mm） 「撮る－メモリー」時： 37 ～ 370mm（4：3モード） （16：9モードでは40 ～ 400 mm） F1.8 ～ 2.1 フィルター径37mm
色温度切り換え	［オート］、［ワンプッシュ］、［屋内］（3 200K）、［屋外］（5 800K）
最低被写体照度	15 lx（ルクス）（F1.8） 0 lx（ルクス）（NightShot時）

[*1] （社）電子情報技術産業協会（JEITA）にて制定された、撮影情報などの付帯情報を追加することができる静止画用のファイルフォーマット。

[*2] 広角画素読み出しによる実動作値

出力端子

A/V端子	10ピン特殊コネクター 映像：1 Vp-p、75 Ω不平衡 Y 出力　1Vp-p、75Ω不平衡 C出力　0.286Vp-p、75Ω不平衡 音声：327mV（出力インピーダンス47kΩ以上）、出力インピーダンス2.2 kΩ以下
コンポーネントビデオ端子	D1/D3映像：コンポーネントビデオ端子 Y：1Vp-p、75Ω不平衡 PB/PR. CB/CR：± 350mVp-p
ヘッドホン端子	ステレオミニジャック（φ 3.5）

入/出力端子

マイク入力端子	ステレオミニジャック（φ 3.5）
LANC端子	ステレオミニミニジャック（φ 2.5）
USB端子	mini-B
HDV/DV端子	i.LINK（IEEE1394　4ピンコネクター　S100）

液晶画面

画面サイズ	6.9cm（2.7型、アスペクト比16：9）
総ドット数	123 200ドット 横560×縦220

電源部、その他

電源電圧	バッテリー端子入力7.2V DC端子入力8.4V
消費電力	ファインダー使用時、明るさ標準： HDV記録時5.8W DV記録時5.2W 液晶画面使用時、明るさ標準： HDV記録時5.9W DV記録時5.3W
動作温度	0℃～ +40℃
保存温度	－ 20℃～ +60℃
外形寸法	71× 94× 188mm （最大突起部を除く）（幅×高さ×奥行き）
本体質量	約680g（本体のみ）
撮影時総質量	約780g（バッテリーNP-FM50、テープ（DVM60）、レンズキャップ含む。）
付属品	“メモリースティック　デュオ” 16MB（1） メモリースティック　デュオアダプター（1） ACアダプター（1） 電源コード（1） レンズキャップ（1） レンズフード（1） ワイヤレスリモコン（1） AV接続ケーブル（1） D端子コンポーネントビデオケーブル（1） USBケーブル（1） リチャージャブルバッテリーパック NP-FM50（1） 取扱説明書（1） 保証書（1）

ACアダプター　AC-L15A/L15B

電源	AC100 ～ 240V、50/60Hz
消費電力	18W
定格出力	DC8.4V *
動作温度	0℃～ +40℃
保存温度	－ 20℃～ +60℃
外形寸法	約56× 31× 100mm （最大突起部をのぞく） （幅×高さ×奥行き）
質量	約190g（本体のみ）

* その他の仕様についてはACアダプターのラベルをご覧ください。

リチャージャブルバッテリーパック NP-FM50

最大電圧	DC8.4V
公称電圧	DC7.2V
容量	8.5Wh（1 180mAh）
最大外形寸法	約38.2× 20.5× 55.6mm （幅×高さ×奥行き）
質量	約76g
使用温度	0℃～ +40℃
使用電池	Li-ion

本機の仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

Model information table

Model	HDR-HC1	HDR-HC1E	HDR-HC1K	HDR-HC1EK
Destination	US, CND, E, KR, J	AEP, UK, NE, E, AUS, CH	JE	JE
Color system	NTSC	PAL	NTSC	PAL

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  BR : Brazilian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  HK : Hong Kong model
  J : Japanese model
  JE : Tourist model
  KR : Korea model
  NE : North European model

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

サービス，点検時には次のことにご注意下さい。

1. **注意事項をお守りください。**
   サービスのとき特に注意を要する個所については，キャビネット，シャーシ，部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. **指定部品のご使用を**
   セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は，使用されていたものと同じ特性の部品を使用して下さい。特に回路図，部品表に0 印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. **部品の取付けや配線の引きまわしはもとどおりに**
   安全上，チューブやテープなどの絶縁材料を使用したり，プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパによって発熱部品や高圧部品に接近しないよう配慮されていますので，これらは必ずもとどおりにして下さい。
4. **サービス後は安全点検を**
   サービスのために取外したネジ，部品，配線がもとどおりになっているか，またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し，安全性が確保されていることを確認して下さい。
5. **チップ部品交換時の注意**
   - 取外した部品は再使用しないで下さい。
   - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. **フレキシブルプリント基板の取扱いについて**
   - コテ先温度を270℃前後にして行なって下さい。
   - 同一パターンに何度もコテ先を当てないで下さい。（3回以内）
   - パターンに力が加わらないよう注意して下さい。
7. **無鉛半田について**
   無鉛半田を使用している基板には，無鉛（Lead Free）を意味するレッドフリーマークがプリントされています。
   （注意：基板サイズによっては，無鉛半田を使用していてもレッドフリーマークがプリントされていないものがあります）
   ：レッドフリーマーク
   無鉛半田には，以下の特性があります。
   - 融点が従来の半田よりも約40℃高い。
     従来の半田こてをそのまま使用することは可能ですが，少し長めにこてを当てる必要があります。
     温度調節機能のついた半田こてを使用する場合，約350℃に設定して下さい。
     注意：半田こてを長く当てすぎると，基板のパターン（銅箔）がはがれてしまうことがありますので，注意して下さい。
   - 粘性が強い
     従来の半田よりも粘性が強いため，IC端子などが半田ブリッジしないように注意して下さい。
   - 従来の半田と混ぜて使用可能
     無鉛半田には無鉛半田を追加するのが最適ですが，従来の半田を追加しても構いません。

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1. SERVICE NOTE

ENGLISH JAPANESE

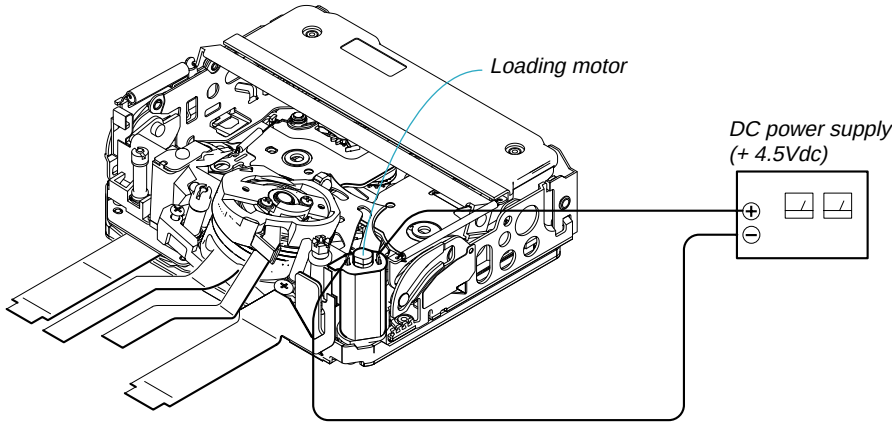
1-1. POWER SUPPLY DURING REPAIRS

In this unit, about 10 seconds after power is supplied to the battery terminal using the regulated power supply (8.4V), the power is shut off so that the unit cannot operate.
These following method is available to prevent this.

Method:
Use the AC power adaptor (AC-L15A/L15B).

1-2. TO TAKE OUT A CASSETTE WHEN NOT EJECT (FORCE EJECT)

① Refer to "2. DISASSEMBLY" to remove the mechanism deck block.
② Supply +4.5V from the DC power supply to the loading motor and unload with a pressing the cassette compartment.



1-3. SETTING THE "FORCED POWER ON" MODE

It is possible to turn on power by adjustment remote commander (RM-95).
Operate the VTR function using the adjustment remote commander (RM-95) (with the HOLD switch set in the OFF position).

1-3-1. Setting the "Forced Camera Power ON" Mode

1) Select page: 0, address: 01, and set data:01.
2) Select page: A, address: 10, set data:01 and press the "PAUSE" button of the adjustment remote commander.

1-3-2. Setting the "Forced VTR Power ON" Mode

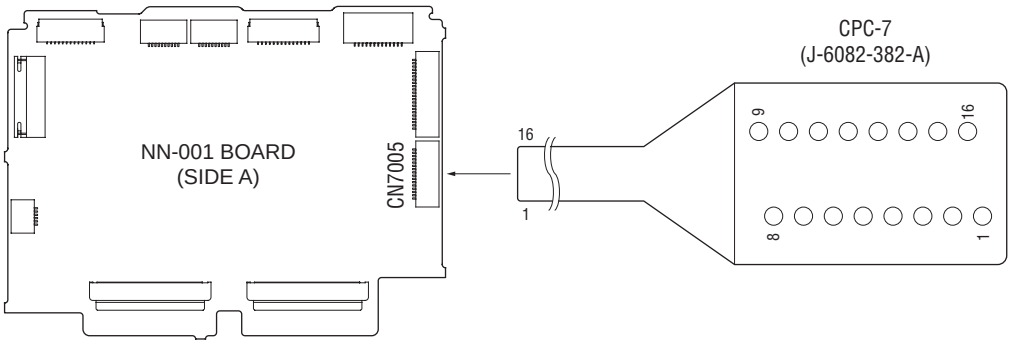
1) Select page: 0, address: 01, and set data:01.
2) Select page: A, address: 10, set data:02 and press the "PAUSE" button of the adjustment remote commander.

1-3-3. Exiting the "Forced Power ON" Mode

1) Select page: 0, address: 01, and set data:01.
2) Select page: A, address: 10, set data:00 and press the "PAUSE" button of the adjustment remote commander.
3) Select page: 0, address: 01, and set data: 00.

1-4. USING SERVICE JIG

Connect the CPC-7 jig connector (J-6082-382-A) to the CN7005 of NN-001 board.



1-5. SELF-DIAGNOSIS FUNCTION

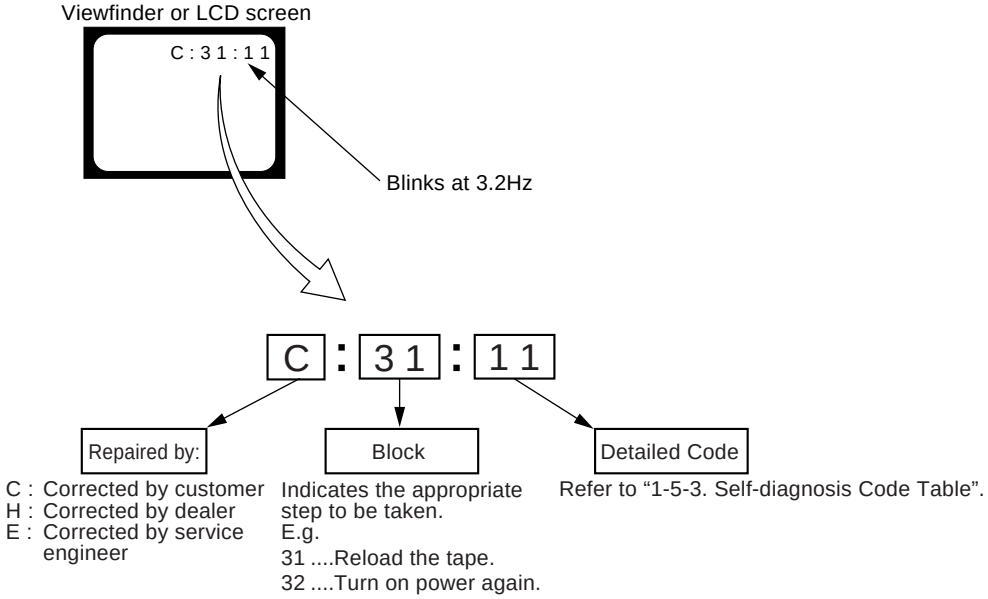
1-5-1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the viewfinder or LCD screen what to do. This function consists of two display; self-diagnosis display and service mode display.

Details of the self-diagnosis functions are provided in the Instruction manual.

1-5-2. Self-diagnosis Display

When problems occur while the unit is operating, the counter of the viewfinder or LCD screen shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the “repaired by:”, “block” in which the problem occurred, and “detailed code” of the problem.


Viewfinder or LCD screen
C : 3 1 : 1 1
Blinks at 3.2Hz
C : 31 : 11
Repaired by:
Block
Detailed Code
C : Corrected by customer
H : Corrected by dealer
E : Corrected by service engineer
Indicates the appropriate step to be taken.
E.g.
31 ....Reload the tape.
32 ....Turn on power again.
Refer to “1-5-3. Self-diagnosis Code Table”.

1-5-3. Self-diagnosis Code Table

Self-diagnosis Code					Symptom/State	Correction
Repaired by:	Block Function		Detailed Code			
C	0	4	0	0	Non-standard battery is used.	Use the InfoLITHIUM battery.
C	2	1	0	0	Condensation.	Remove the cassette, and insert it again after one hour.
C	2	2	0	0	Video head is dirty.	Clean with the optional cleaning cassette.
C	3	1	1	0	LOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3	1	1	1	UNLOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3	1	2	0	T reel side tape slacking when unloading.	Load the tape again, and perform operations from the beginning.
C	3	1	2	1	S reel side tape slacking when unloading.	Load the tape again, and perform operations from the beginning.
C	3	1	2	2	T reel fault.	Load the tape again, and perform operations from the beginning.
C	3	1	2	3	S reel fault.	Load the tape again, and perform operations from the beginning.
C	3	1	3	0	FG fault when starting capstan.	Load the tape again, and perform operations from the beginning.
C	3	1	3	1	FG fault during normal capstan operations.	Load the tape again, and perform operations from the beginning.
C	3	1	4	0	FG fault when starting drum.	Load the tape again, and perform operations from the beginning.
C	3	1	4	1	PG fault when starting drum.	Load the tape again, and perform operations from the beginning.
C	3	1	4	2	FG fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3	1	4	3	PG fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3	1	4	4	Phase fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3	2	1	0	LOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	1	1	UNLOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	0	T reel side tape slacking when unloading.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	1	S reel side tape slacking when unloading.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	2	T reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	3	S reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	3	0	FG fault when starting capstan.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	3	1	FG fault during normal capstan operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	0	FG fault when starting drum.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	1	PG fault when starting drum.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	2	FG fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	3	PG fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	4	Phase fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.

Self-diagnosis Code			Symptom/State	Correction
Repaired by:	Block Function	Detailed Code		
E	6 1	0 0	Difficult to adjust focus (Cannot initialize focus.)	Inspect the lens block focus MR sensor (Pin ⑲, ㉑ of CN7006 of NN-001 board) when focusing is performed when the focus ring is rotated in the focus manual mode and the focus motor drive circuit (IC7201 of NN-001 board) when the focusing is not performed.
E	6 1	1 0	Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom MR sensor (Pin ⑯, ⑰ of CN7006 of NN-001 board) when zooming is performed when the zoom switch is operated and the zoom motor drive circuit (IC7201 of NN-001 board) when zooming is not performed.
E	6 1	1 1	Focus lens initializing failure and zoom lens initializing failure occur simultaneously.	Inspect the flexible board for breakage or loose connection. If not faulty, inspect the focus and zoom motor drive circuit (IC7201 of NN-001 board).
E	6 2	0 0	Steadyshot function does not work well. (With pitch angular velocity sensor output stopped.)	Inspect pitch angular velocity sensor (SE6802 of EE-001 board) peripheral circuits.
E	6 2	0 1	Steadyshot function does not work well. (With yaw angular velocity sensor output stopped.)	Inspect yaw angular velocity sensor (SE6801 of EE-001 board) peripheral circuits.
E	9 1	0 1	Abnormality when flash is being charged.	Checking of flash unit or replacement of flash unit. (Note)

Note: After repair, be sure to perform “1-6. PROCESS AFTER FIXING FLASH ERROR”.

1-6. PROCESS AFTER FIXING FLASH ERROR

When “FLASH error” (Self-diagnosis Code E:91:**) occurs, to prevent any abnormal situation caused by high voltage, setting of the flash is changed automatically to disabling charge and flash setting.
After fixing, this setting needs to be deactivated. Connect the adjustment remote commander and perform the following process.

Order	Page	Address	Data	Procedure
1	7	01	75	
2	7	00	01	Press PAUSE button.
3	7	02		Check the data changes to “01”.

1. SERVICE NOTE

ENGLISH JAPANESE

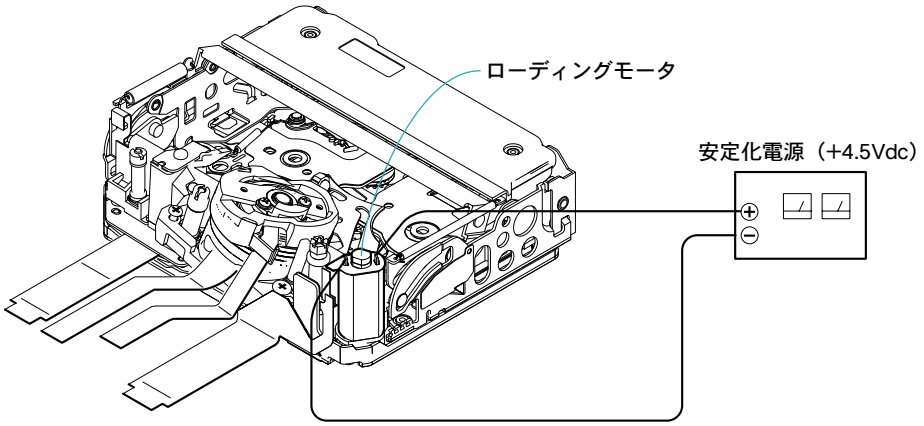
1-1. 修理時の電源供給について

本機では，安定化電源（8.4Vdc）からバッテリ端子に電源を供給した場合，約10秒後にシャットオフし，動作しなくなります。
これを避けるため，下記の方法を用いてください。

方法：
DC入力端子を使用する。（ACアダプタ（AC-L15A/L15Bなど）を使用する。）

1-2. イジェクトしない時のカセット取出し方法（強制イジェクト）

① 2. DISASSEMBLYを参照し，メカデッキを外す。
② カセコン組立を押さえながら，安定化電源より＋4.5Vをローディングモータに加え，アンローディングさせる。



1-3. 強制電源ONモードの設定

調整リモコン（RM-95）を使用して，電源を入れることが出来ます。
VTR操作は調整リモコン（RM-95）で行えます。（HOLDスイッチはOFF）

1-3-1. 強制カメラ電源ONモードの設定

1) ページ：0，アドレス：01にデータ：01をセット。
2) ページ：A，アドレス：10にデータ：01をセットしPAUSEボタンを押す。

1-3-2. 強制VTR電源ONモードの設定

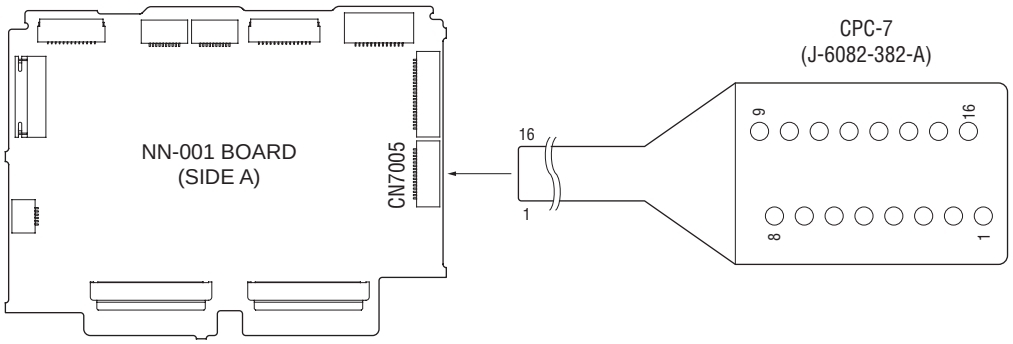
1) ページ：0，アドレス：01にデータ：01をセット。
2) ページ：A，アドレス：10にデータ：02をセットしPAUSEボタンを押す。

1-3-3. 強制電源ONモードの解除

1) ページ：0，アドレス：01にデータ：01をセット。
2) ページ：A，アドレス：10にデータ：00をセットしPAUSEボタンを押す。
3) ページ：0，アドレス：01にデータ：00をセット。

1-4. 使用サービス治具

CPC-7治具コネクタ（J-6082-382-A）をNN-001基板CN7005に接続します。



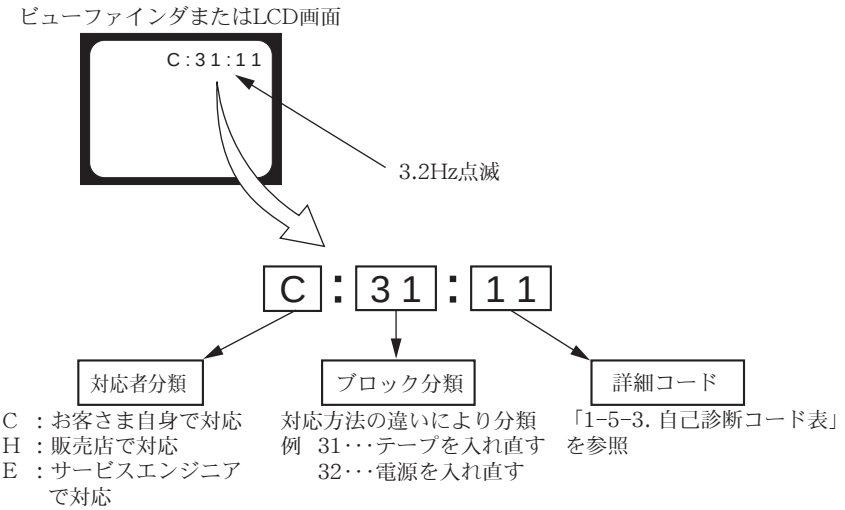
1-5. 自己診断機能

1-5-1.自己診断機能について

本機の動作に不具合が生じたとき，自己診断機能が働き，ビューファインダまたはLCD画面に，どう処置したらよいか判断できる表示を行います。「自己診断表示」と「サービスモード表示」の２つの表示があります。自己診断機能については取扱説明書にも掲載されています。

1-5-2.自己診断表示

本機の動作に不具合が生じたとき，ビューファインダまたはLCD画面のカウンタ表示部分がアルファベットと数字の4桁表示になり，3.2Hzで点滅します。この5文字の表示によって対応者分類および不具合の生じたブロックの分類，不具合の詳細コードを示します。



1-5-3. 自己診断コード表

自己診断コード				症状／状態	対応／方法
対応者	ブロック機能		詳細コード		
C	0	4	0 0	標準でないバッテリを使用している	インフォリチウムバッテリを使用する
C	2	1	0 0	結露している	カセットを取り出して，約１時間してからもう一度入れ直す
C	2	2	0 0	ビデオヘッドが汚れている	別売のクリーニングカセットできれいにする
C	3	1	1 0	LOAD方向，ローディング所定時間内終了せず	テープを入れ直し，再度操作し直す
C	3	1	1 1	UNLOAD方向，ローディング所定時間内終了せず	テープを入れ直し，再度操作し直す
C	3	1	2 0	UNLOAD時，Tリール側テープ弛み	テープを入れ直し，再度操作し直す
C	3	1	2 1	UNLOAD時，Sリール側テープ弛み	テープを入れ直し，再度操作し直す
C	3	1	2 2	Tリール異常	テープを入れ直し，再度操作し直す
C	3	1	2 3	Sリール異常	テープを入れ直し，再度操作し直す
C	3	1	3 0	キャプスタン起動時FG異常	テープを入れ直し，再度操作し直す
C	3	1	3 1	キャプスタン定常時FG異常	テープを入れ直し，再度操作し直す
C	3	1	4 0	ドラム起動時FG異常	テープを入れ直し，再度操作し直す
C	3	1	4 1	ドラム起動時PG異常	テープを入れ直し，再度操作し直す
C	3	1	4 2	ドラム定常時FG異常	テープを入れ直し，再度操作し直す
C	3	1	4 3	ドラム定常時PG異常	テープを入れ直し，再度操作し直す
C	3	1	4 4	ドラム定常時位相異常	テープを入れ直し，再度操作し直す
C	3	2	1 0	LOAD方向，ローディング所定時間内終了せず	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	1 1	UNLOAD方向，ローディング所定時間内終了せず	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	2 0	UNLOAD時，Tリール側テープ弛み	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	2 1	UNLOAD時，Sリール側テープ弛み	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	2 2	Tリール異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	2 3	Sリール異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	3 0	キャプスタン起動時FG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	3 1	キャプスタン定常時FG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	4 0	ドラム起動時FG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	4 1	ドラム起動時PG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	4 2	ドラム定常時FG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	4 3	ドラム定常時PG異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す
C	3	2	4 4	ドラム定常時位相異常	バッテリまたは電源ケーブルを外して付け直し,再度操作し直す

自己診断コード			症状／状態	対応／方法
対応者	ブロック機能	詳細コード		
E	6 1	0 0	フォーカスが合いにくい (フォーカスの初期化ができない)	フォーカス手動モードでフォーカスリングを回した時, フォーカス動作をすればレンズブロックのフォーカスMRセンサ(NN-001基板CN7006 ⑲, ㉑ピン)を点検。フォーカス動作をしなければフォーカスモータドライブ回路(NN-001基板IC7201)を点検。
E	6 1	1 0	ズーム動作の異常(ズームレンズの初期化ができない)	ズームレバーを操作した時, ズーム動作をすればレンズブロックのズームMRセンサ(NN-001基板CN7006 ⑯, ⑰ピン)を点検。ズーム動作をしなければズームモータドライブ回路(NN-001基板IC7201)を点検。
E	6 1	1 1	フォーカスレンズ初期化異常, ズームレンズ初期化異常の同時発生	フレキシブル基板の切れ, 半挿しを点検。 問題がなければフォーカス, ズームモータドライブ回路(NN-001基板IC7201)を点検。
E	6 2	0 0	手振れ補正が効きにくい (PITCH角速度センサ出力張り付き)	PITCH角速度センサ(EE-001基板SE6802)周辺回路点検
E	6 2	0 1	手振れ補正が効きにくい (YAW角速度センサ出力張り付き)	YAW角速度センサ(EE-001基板SE6801)周辺回路点検
E	9 1	0 1	フラッシュの充電異常	フラッシュユニットの点検または交換(注)

注意：修理後は，必ず「1-6. フラッシュ異常修理後の処置」を行ってください。

1-6. フラッシュ異常修理後の処置

フラッシュエラー（自己診断コード E：91：＊＊）発生時は、高電圧による異常を防止するために自動的にフラッシュ充電・発光禁止の設定になります。修理後は、この設定を解除する必要があります。調整用リモコンを接続し、下記の処置を行ってください。

順序	ページ	アドレス	データ	作業内容
1	7	01	75	
2	7	00	01	PAUSEボタンを押す
3	7	02		データが“01”になることを確認

2. DISASSEMBLY

Link

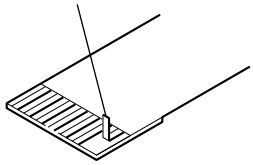
- DISASSEMBLY
- THE METHOD OF ATTACHMENT OF FP-248, FP-259 FLEXIBLE BOARD
- HELP

2. DISSASSEMBLY

1-1. NOTE FOR REPAIR

- Make sure that the flat cable and flexible board are not cracked of bent at the terminal. Do not insert the cable insufficiently nor crookedly.
- When remove a connector, dont' pull at wire of connector. It is possible that a wire is snapped.
- When installing a connector, dont' press down at wire of connector. It is possible that a wire is snapped.

Cut and remove the part of gilt which comes off at the point. (Be careful or some pieces of gilt may be left inside)

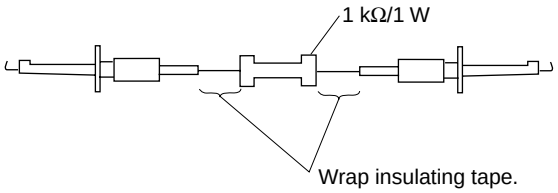


1-2. DISCHARGING OF THE FP-284 FLEXIBLE BOARD'S CHARGING CAPACITOR (C901, C902)

The charging capacitor (C901, C902) of the FP-284 flexible board is charged up to the maximum 300 V potential.
There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the unit is simply turned off. Therefore, the remaining voltage must be discharged as described below.

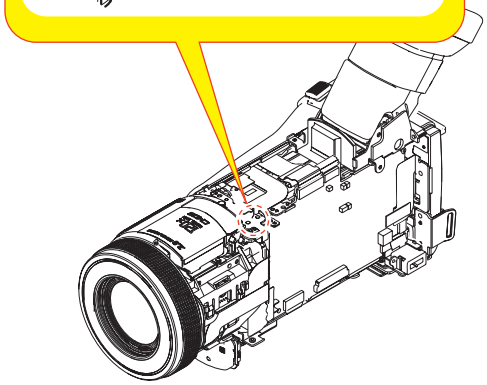
Preparing the Short Jig

To preparing the short jig, a small clip is attached to each end of a resistor of 1 kΩ /1 W (1-215-869-11).
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.

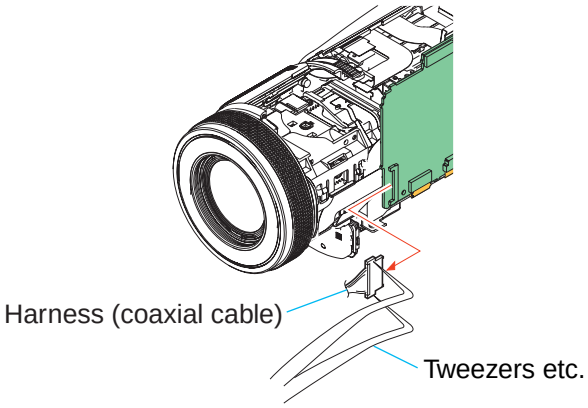


Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between the two points with the short jig about 10 seconds.



1-3. NOTE FOR DISCONNECTING THE HARNESS (COAXIAL CABLE)



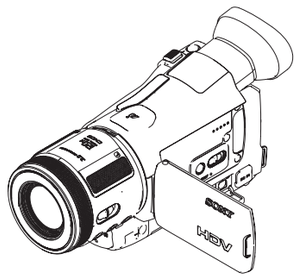
When disconnecting the harness (coaxial cable), do not pull the harness part but pull off the connector body with tweezers etc.

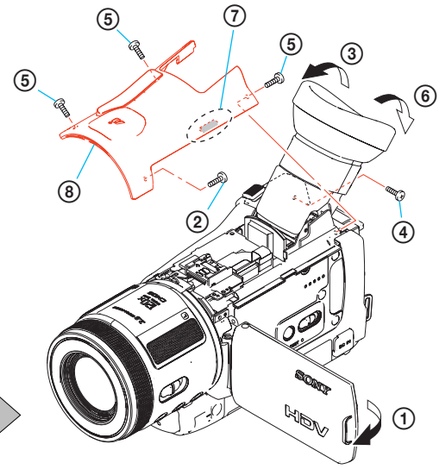
2. DISASSEMBLY

HELP

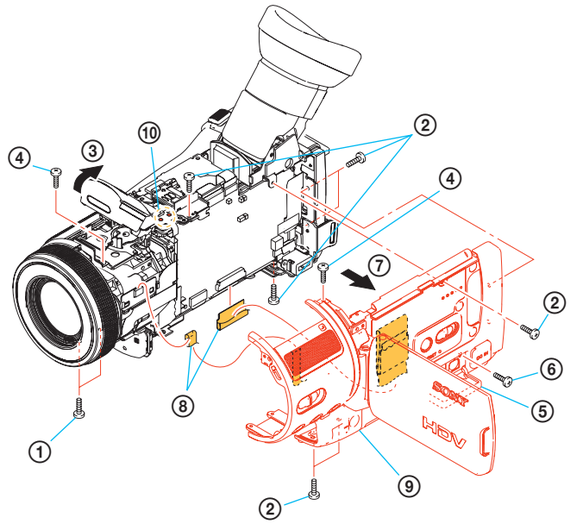
The following flow chart shows the disassembly procedure.

2-1. DISASSEMBLY

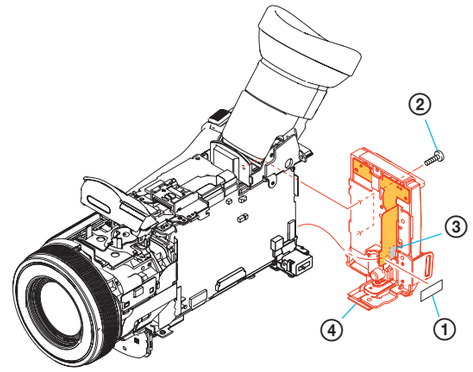




① Open the LCD.
② Screw *x1*
③ Lifting up the EVF lens block.
④ Screw *x1*
⑤ Screw *x3*
⑥ Turn down the EVF lens block.
⑦ Claw *x1*
⑧ Cabinet (upper) block

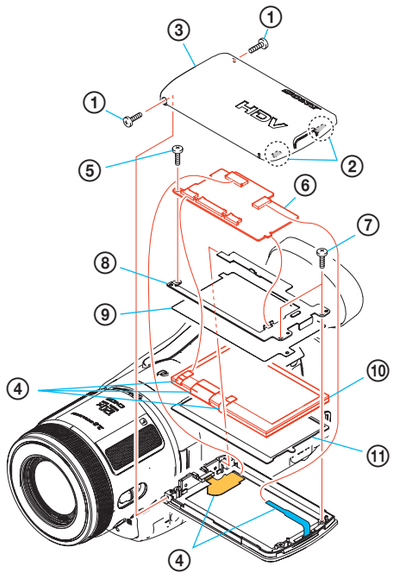


① Screw *x2*
② Screw *x7*
③ Open the flash unit.
④ Screw *x2*
⑤ Open the jack cover (rear).
⑥ Screw *x1*
⑦ Remove the cabinet (R) block .
⑧ Flexible board *x2*
⑨ Cabinet (R) block
⑩ Discharging the Capacitor.



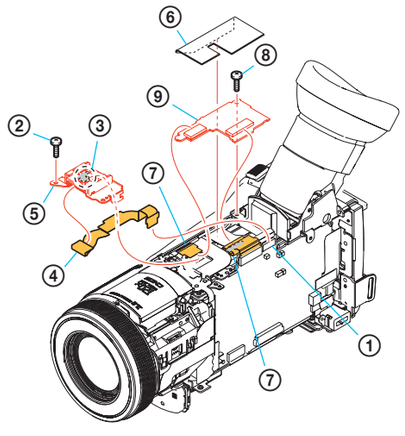
① Tape (A) *x1*
② Screw *x2*
③ Flexible board *x1*
④ Battery panel block

to Page 2-5



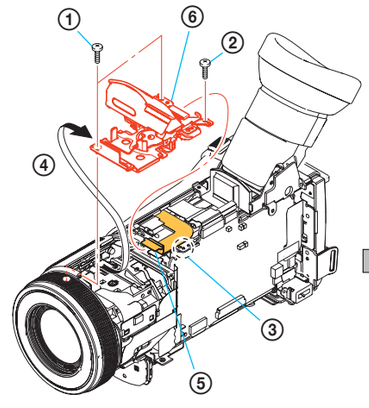
① Screw *x2*
② Claw *x2*
③ P cabinet (C) assembly
④ Flexible board *x5*
⑤ Screw *x1*
⑥ PP-001 board
⑦ Screw *x2*
⑧ Panel frame
⑨ Panel insulating sheet
⑩ D9001, LCD9001
⑪ Panel cushion

Refer to page 2-1 " Discharging of the FP-284 flexible board's charging capacitor (C901, C902) ", when discharging the capacitor.



① Connector *x1*
② Screw *x1*
③ Claw *x1*
④ Flexible board *x1*
⑤ External connector
⑥ Sheet (HS) *x1*
⑦ Flexible board *x2*
⑧ Screw *x1*
⑨ OO-001 board

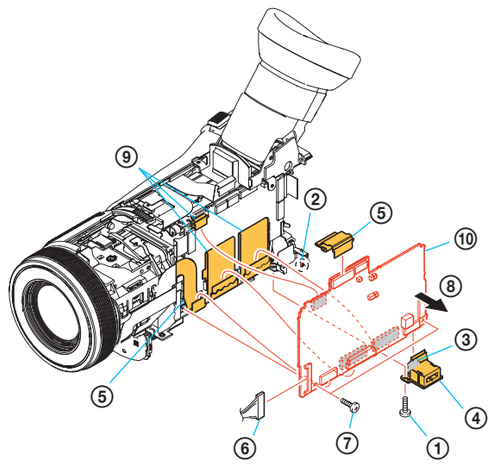
HELP



① Screw *x2*
② Screw *x1*
③ Boss *x1*
④ Remove the stroboscope block assembly.
⑤ Flexible board *x1*
⑥ Stroboscope block assembly

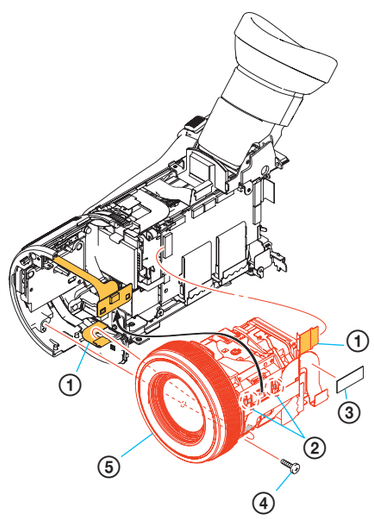
HELP

from Page 2-4

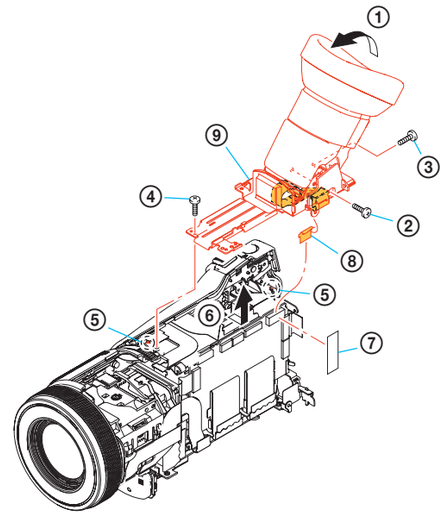


① Screw *x1*
② Claw *x1*
③ Flexible board *x1*
④ DC-IN connector section
⑤ Flexible board *x2*
⑥ Connector *x1*
⑦ Screw *x2*
⑧ Remove the TT board.
⑨ Flexible board *x3*
⑩ TT board

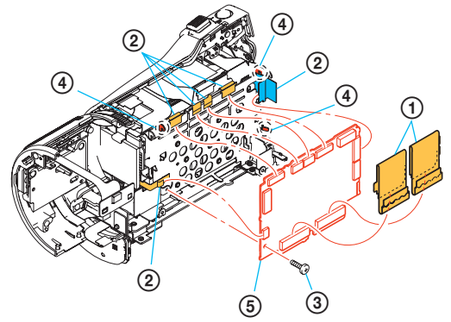
Refer to page 2-1
" Note for disconnecting the harness (coxial cable) ".



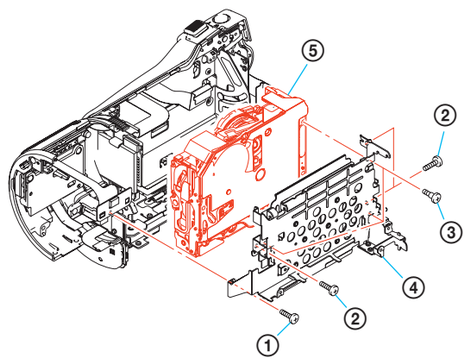
① Flexible board *x2*
② Claw *x2*
③ Tape (A) *x1*
④ Screw *x1*
⑤ Lens block assembly



① Lifting up the lens block.
② Screw *x1*
③ Screw *x1*
④ Screw *x1*
⑤ Boss *x2*
⑥ Remove the EVF lens block.
⑦ Tape (A) *x1*
⑧ Flexible board *x1*
⑨ EVF lens block



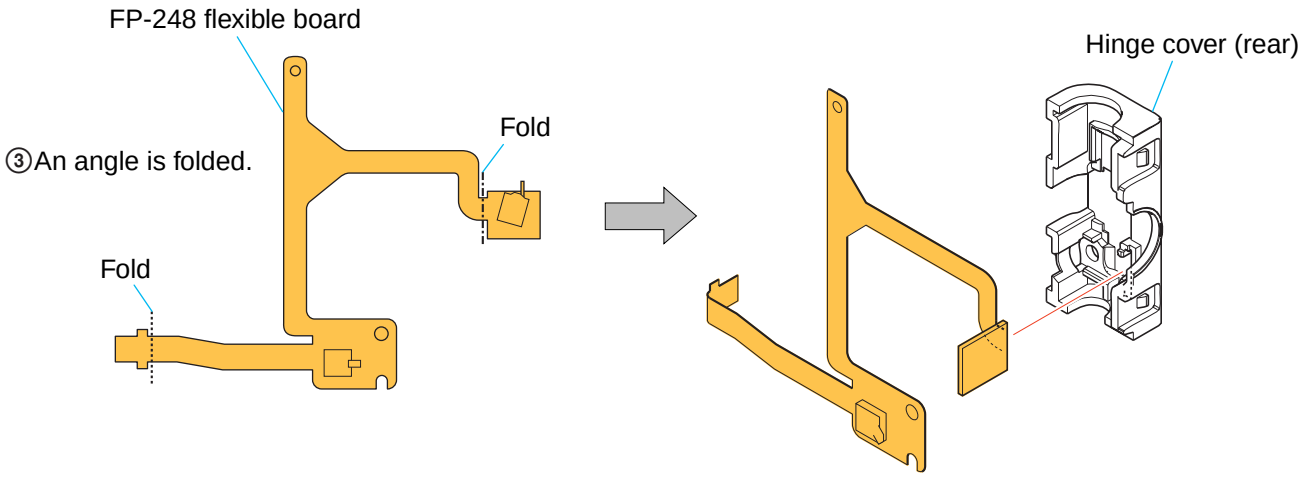
① Flexible board *x2* HELP
② Flexible board *x6*
③ Screw *x1*
④ Hook *x3*
⑤ NN board



① Screw *x1*
② Screw *x3*
③ Screw (M1.4x1.5) *x3*
④ MD frame assembly
⑤ Mechanism deck

2-2. THE METHOD OF ATTACHMENT OF FP-248, FP-259 FLEXIBLE BOARD

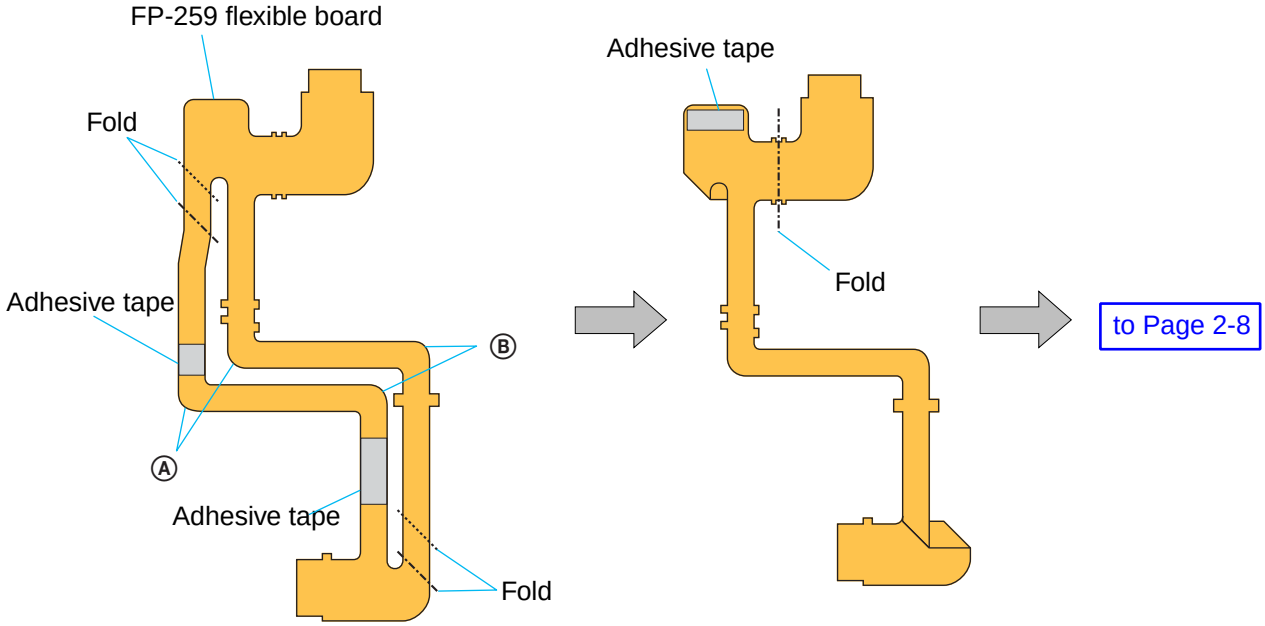
– FP-248 FLEXIBLE BOARD –



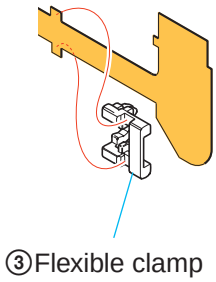
– FP-259 FLEXIBLE BOARD –

①The Ⓐ and Ⓐ, Ⓑ and Ⓑ section are united and an angle is folded.

②An angle is folded.

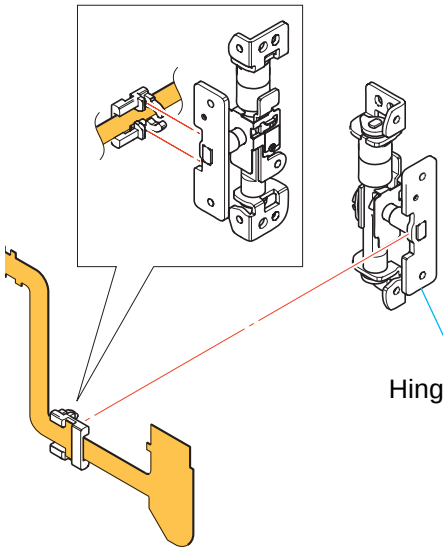


from Page 2-7



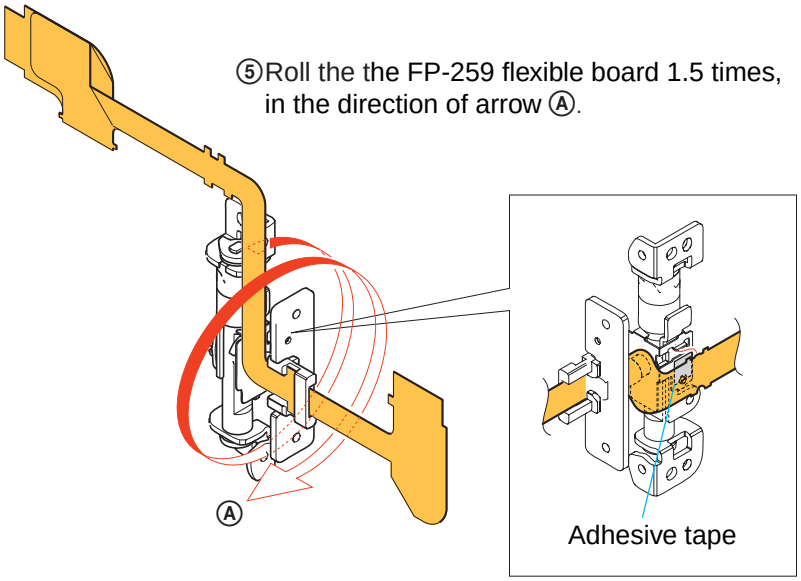
③Flexible clamp

④Set the hinge assembly in the shown below.



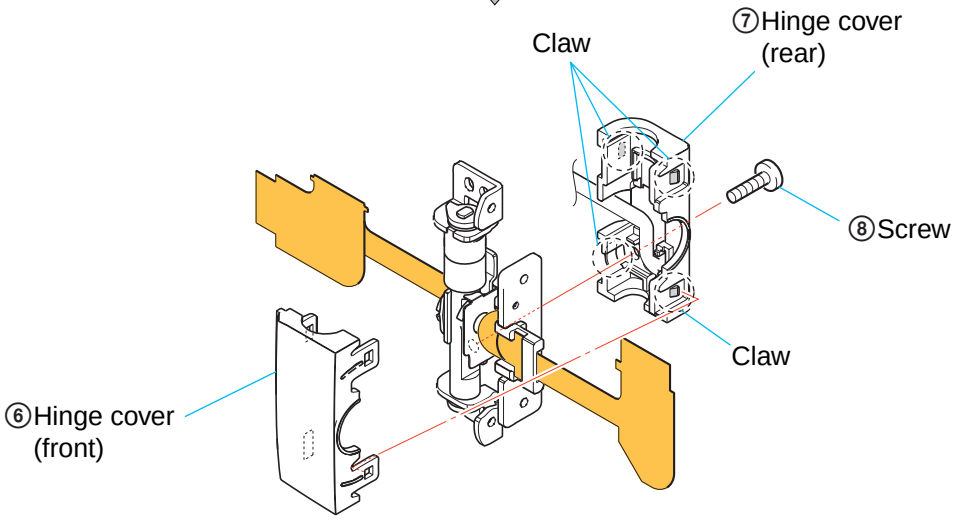
Hinge assembly

⑤Roll the the FP-259 flexible board 1.5 times,
in the direction of arrow Ⓐ.



Ⓐ

Adhesive tape



⑦Hinge cover
(rear)

Claw

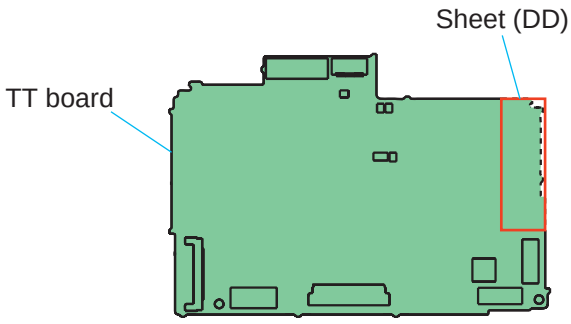
⑧Screw

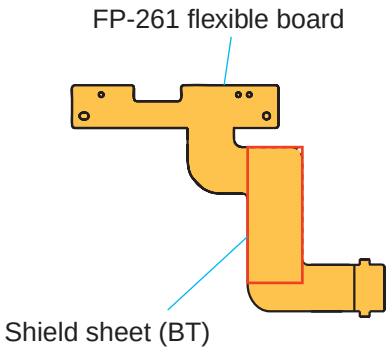
Claw

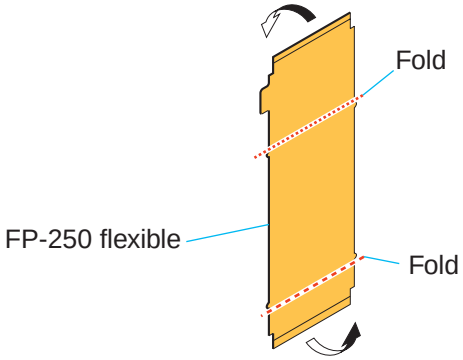
⑥Hinge cover
(front)

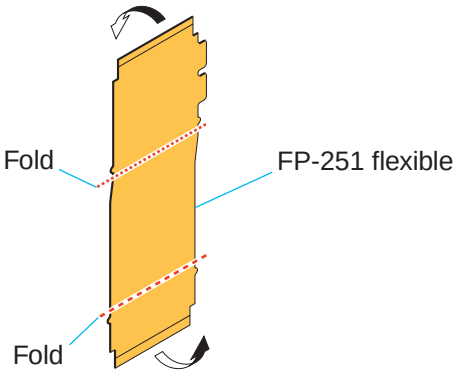
HELP

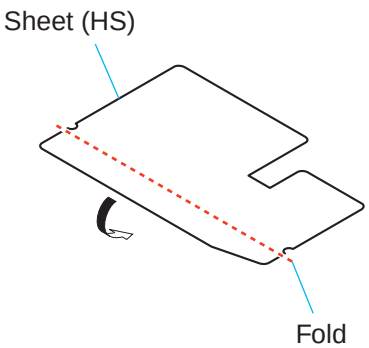
Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

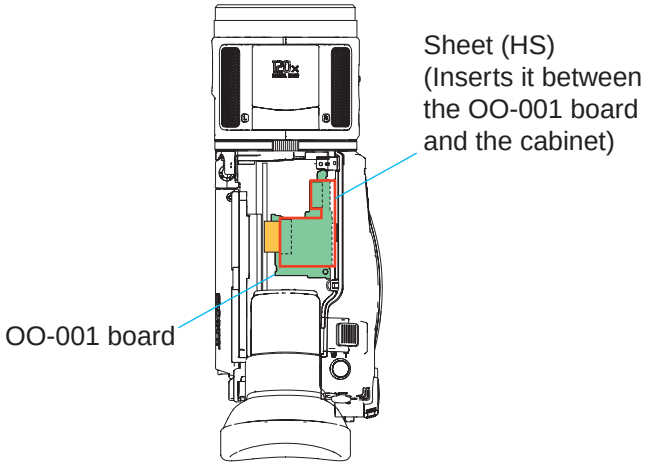












3. BLOCK DIAGRAMS

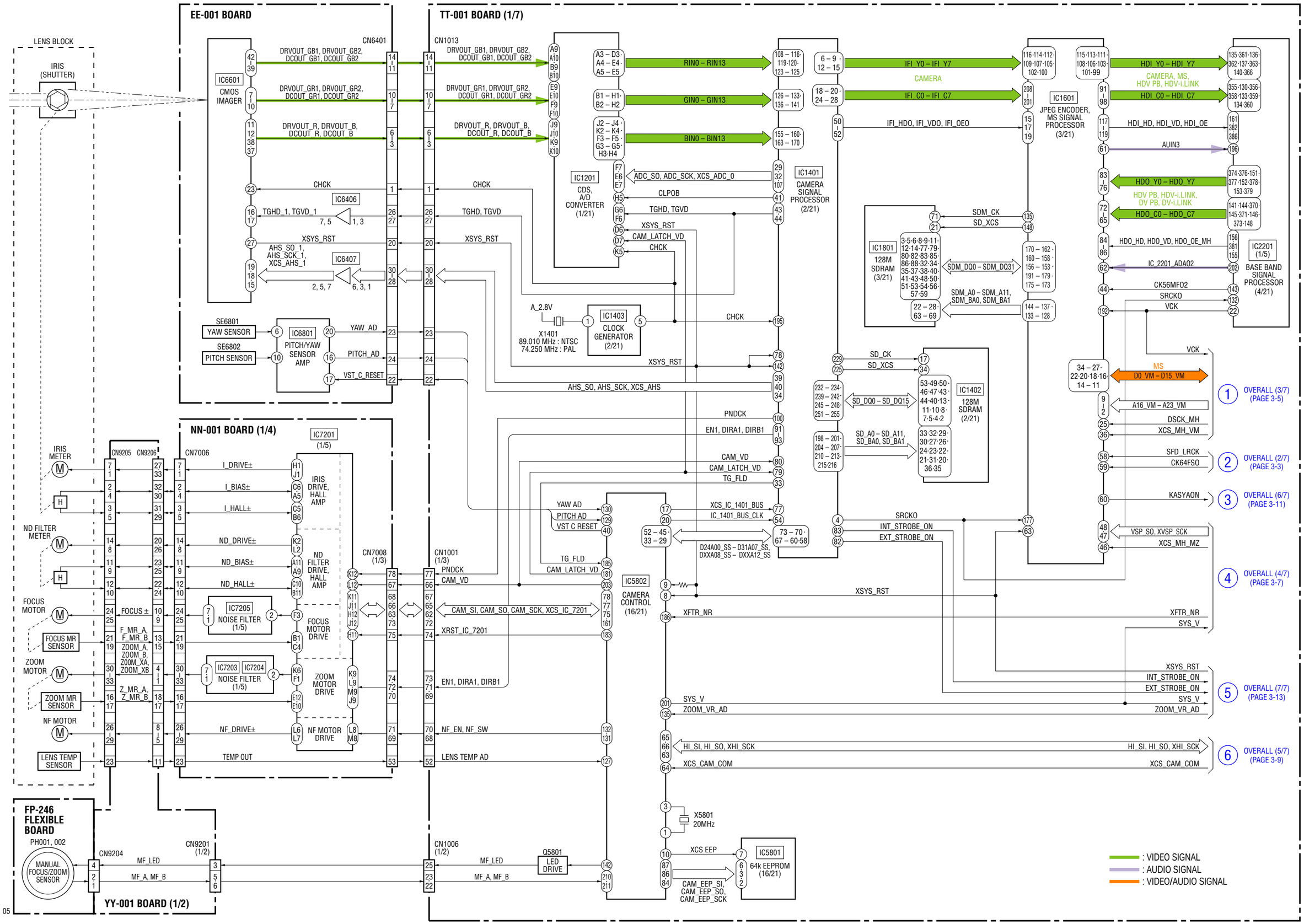
Link

OVERALL BLOCK DIAGRAM (1/7)	OVERALL BLOCK DIAGRAM (7/7)
OVERALL BLOCK DIAGRAM (2/7)	POWER BLOCK DIAGRAM (1/5)
OVERALL BLOCK DIAGRAM (3/7)	POWER BLOCK DIAGRAM (2/5)
OVERALL BLOCK DIAGRAM (4/7)	POWER BLOCK DIAGRAM (3/5)
OVERALL BLOCK DIAGRAM (5/7)	POWER BLOCK DIAGRAM (4/5)
OVERALL BLOCK DIAGRAM (6/7)	POWER BLOCK DIAGRAM (5/5)

3. BLOCK DIAGRAMS

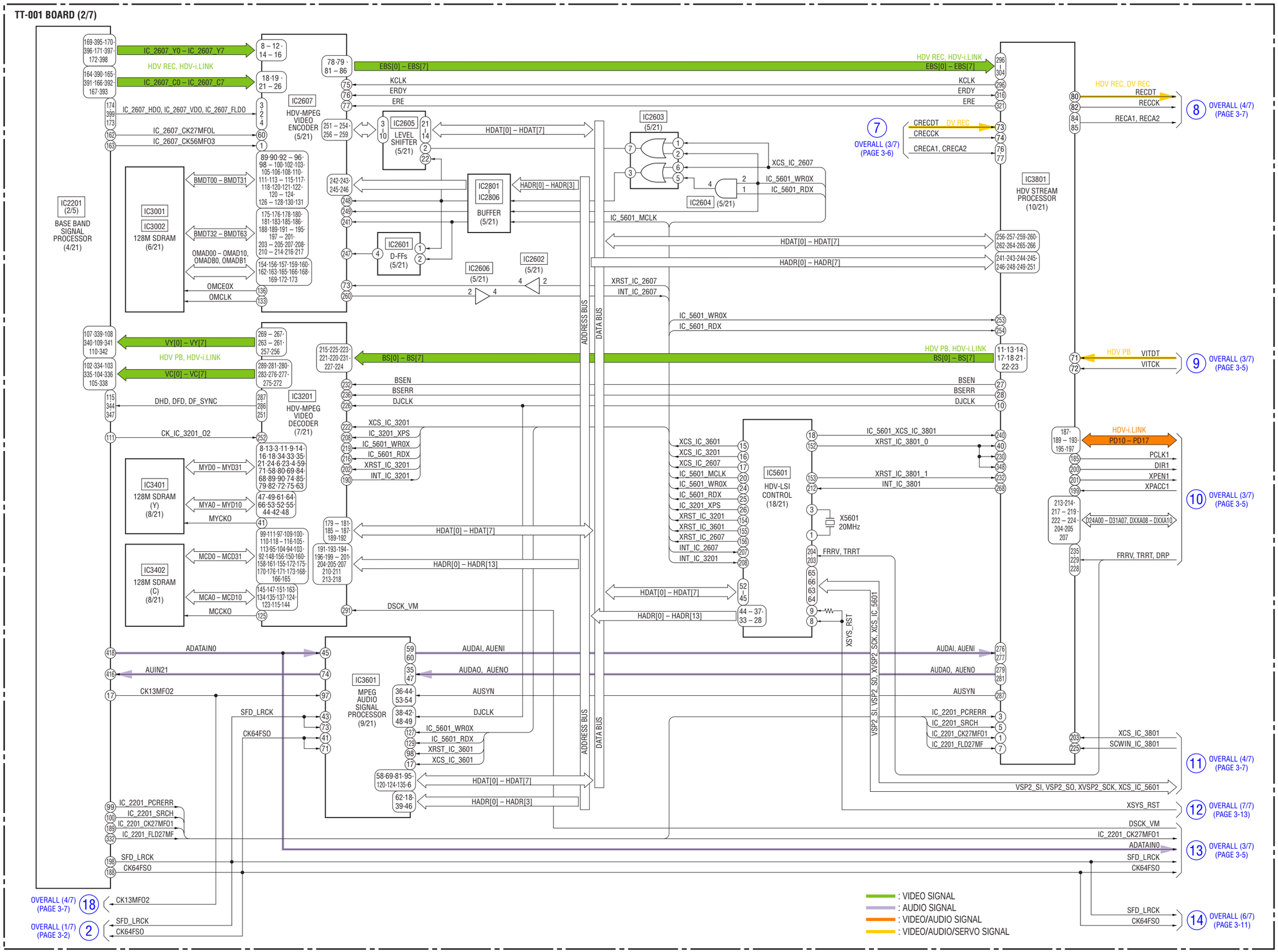
3-1. OVERALL BLOCK DIAGRAM (1/7)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

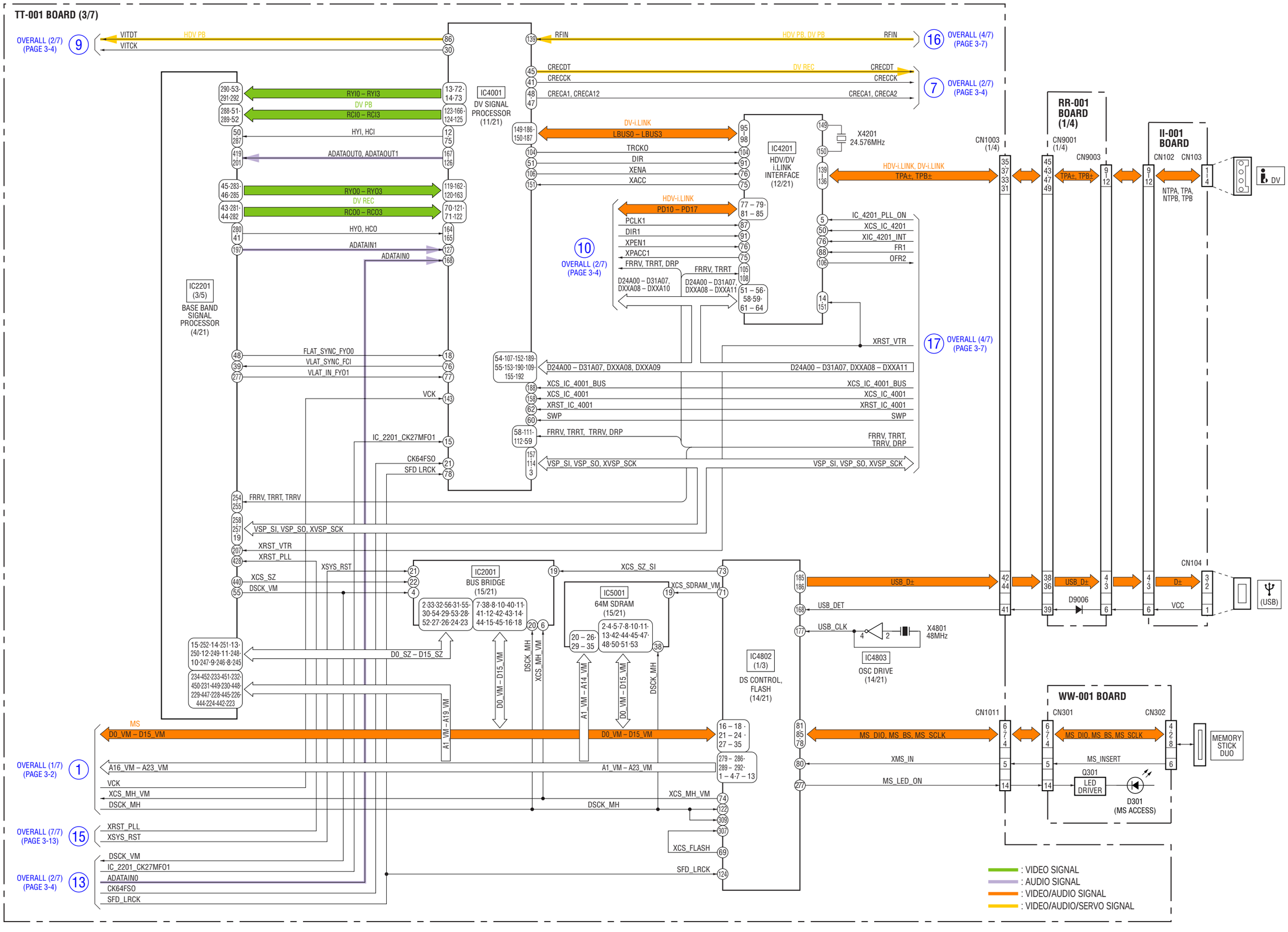


3-2. OVERALL BLOCK DIAGRAM (2/7)

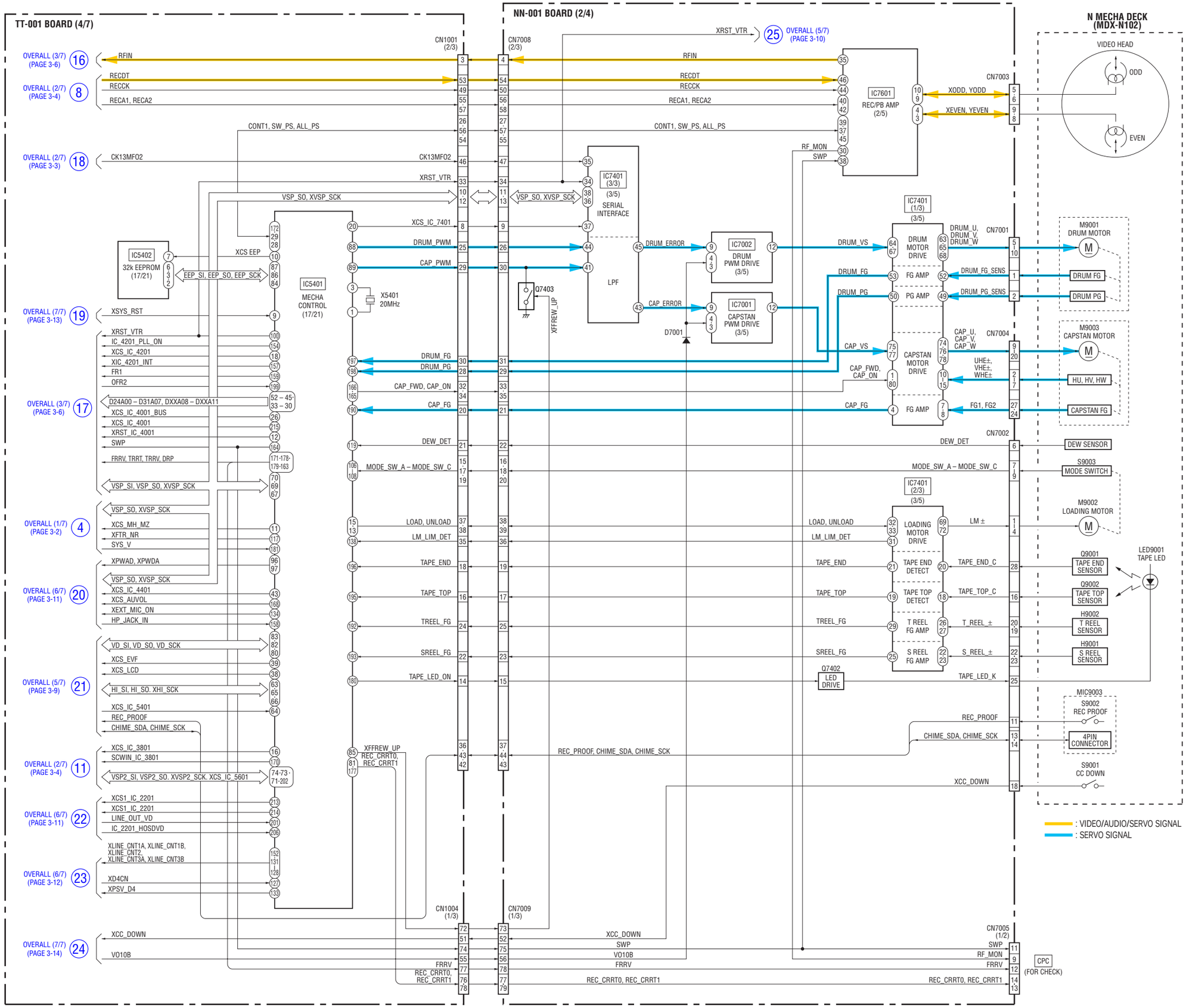
( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



3-3. OVERALL BLOCK DIAGRAM (3/7) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

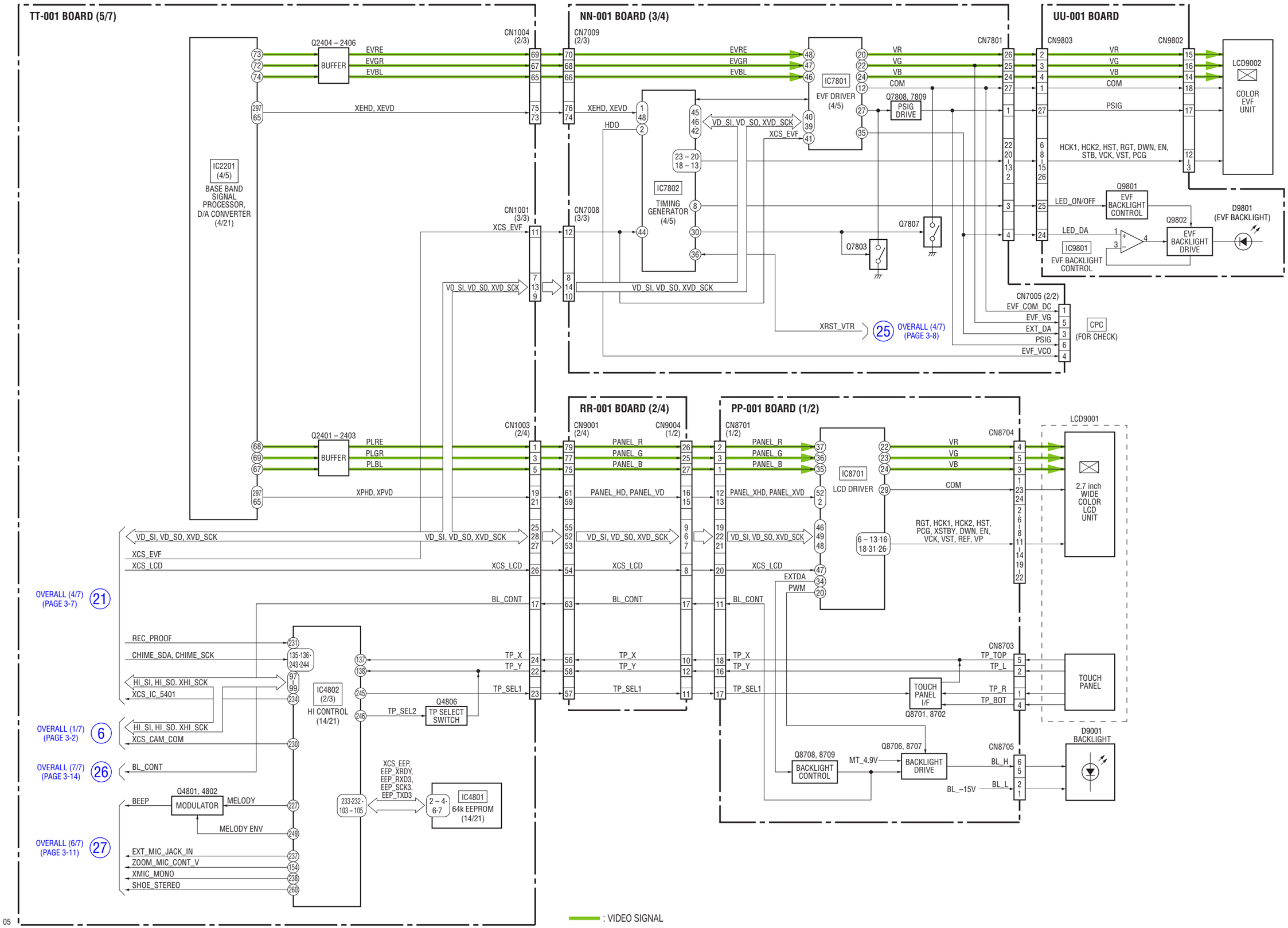


3-4. OVERALL BLOCK DIAGRAM (4/7) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

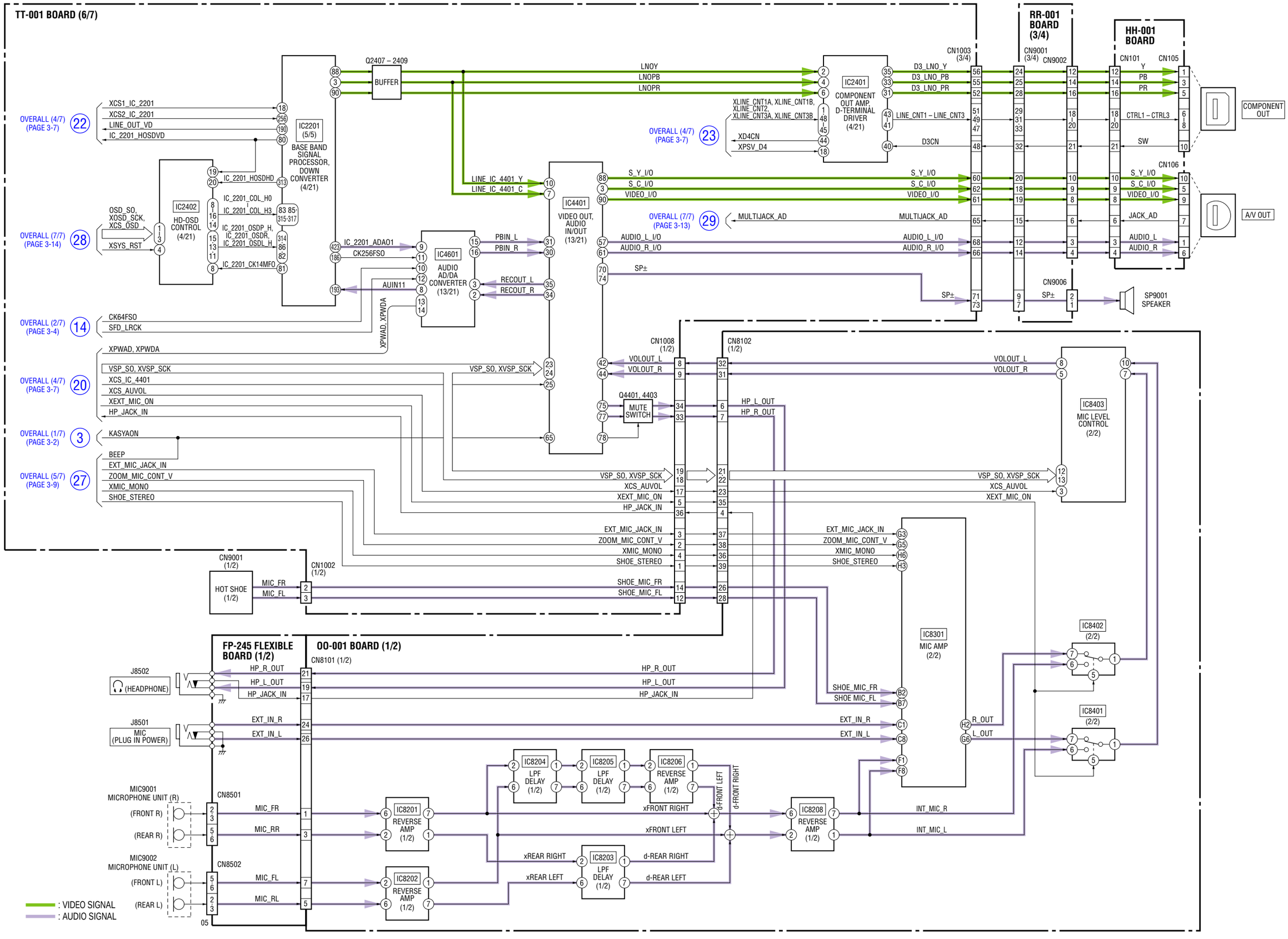


3-5. OVERALL BLOCK DIAGRAM (5/7)

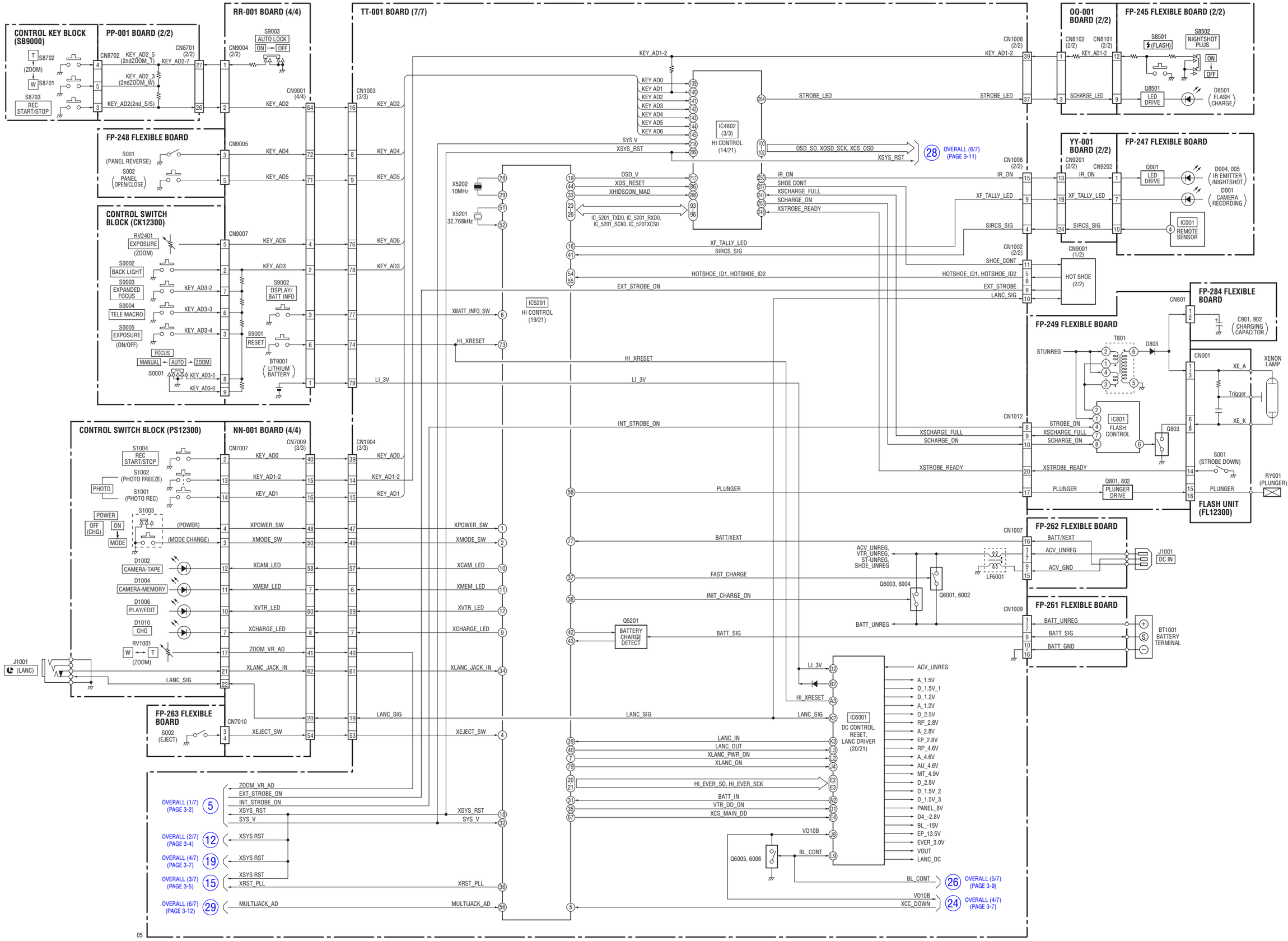
( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



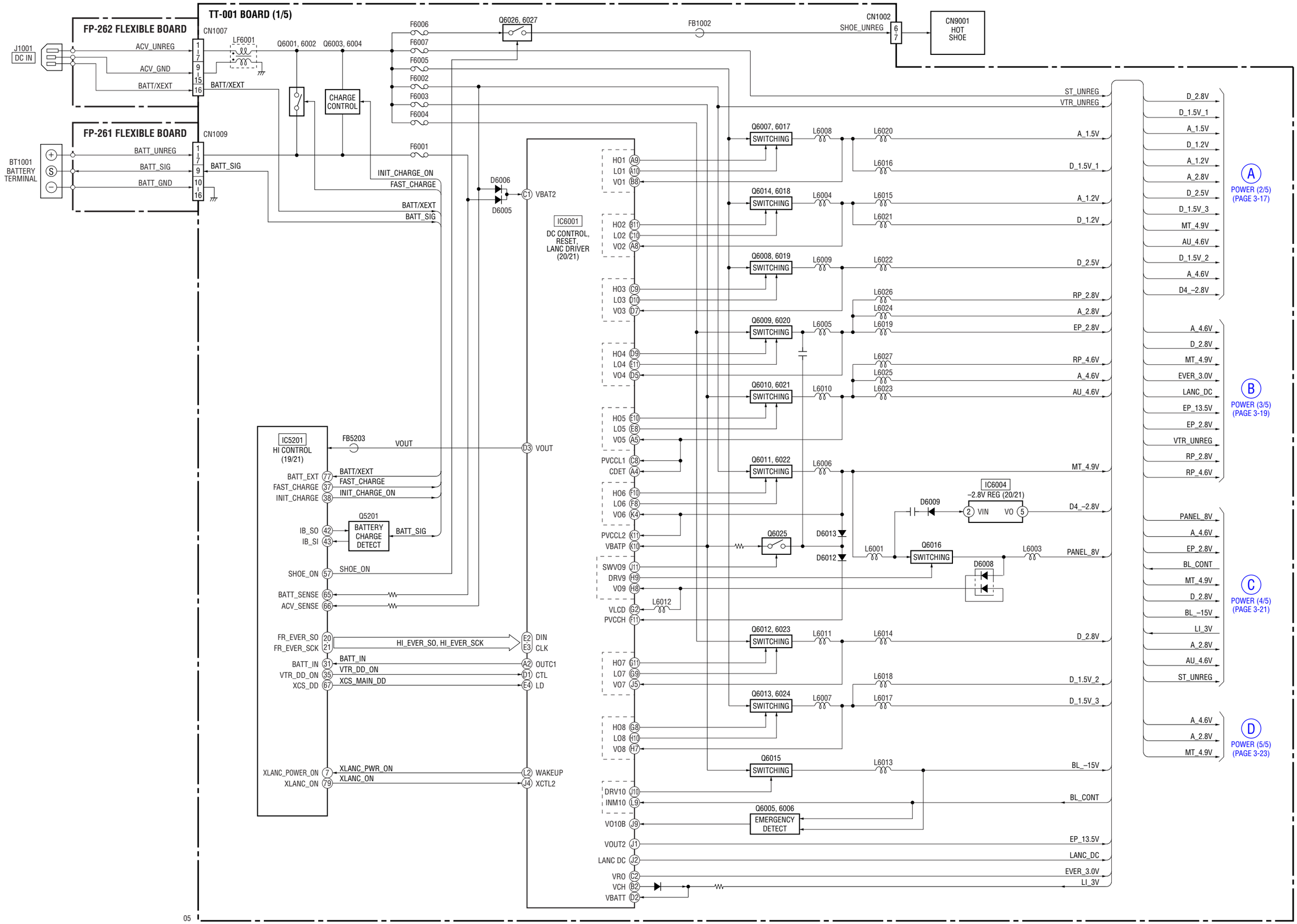
3-6. OVERALL BLOCK DIAGRAM (6/7) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



3-7. OVERALL BLOCK DIAGRAM (7/7) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

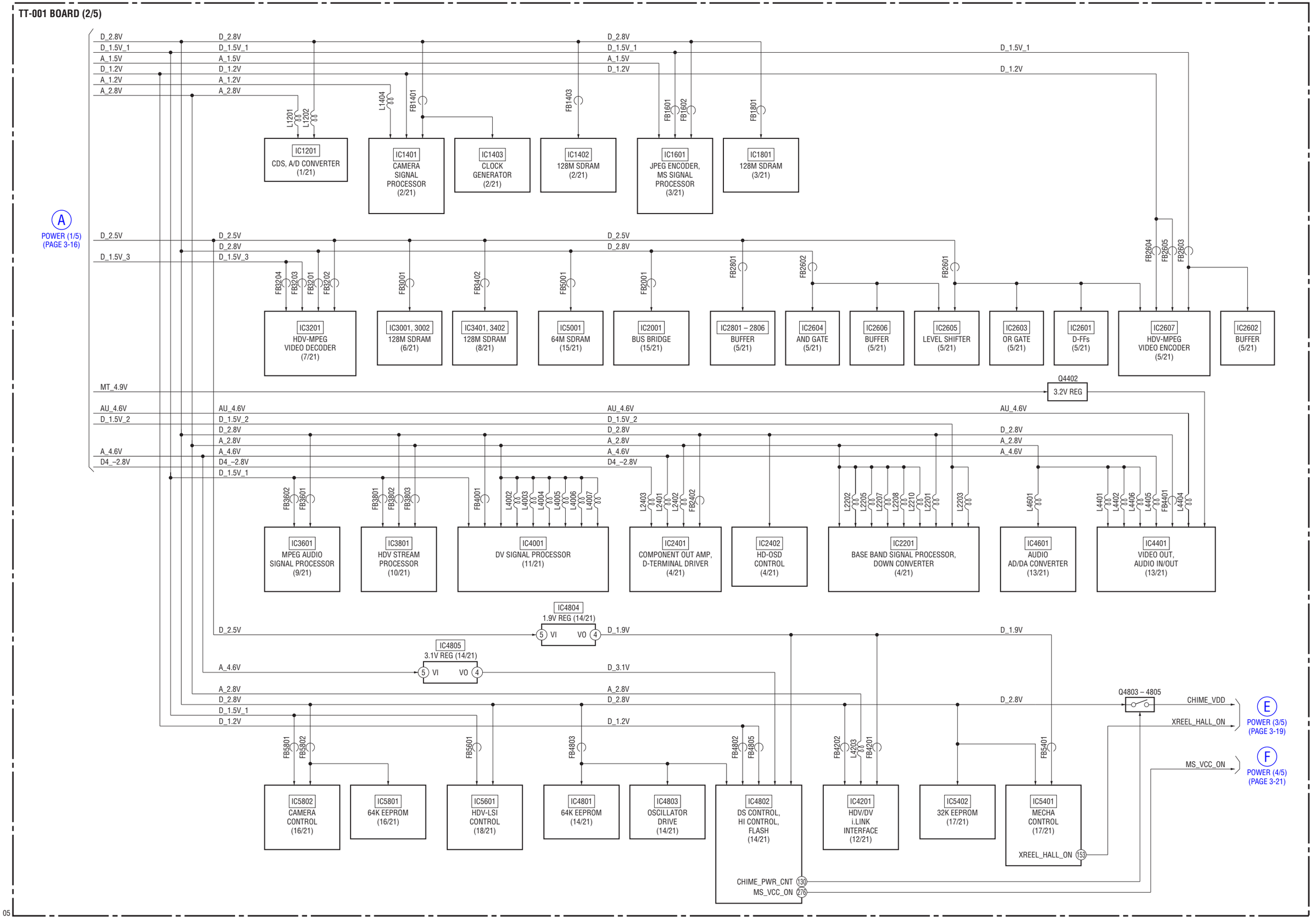


3-8. POWER BLOCK DIAGRAM (1/5) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

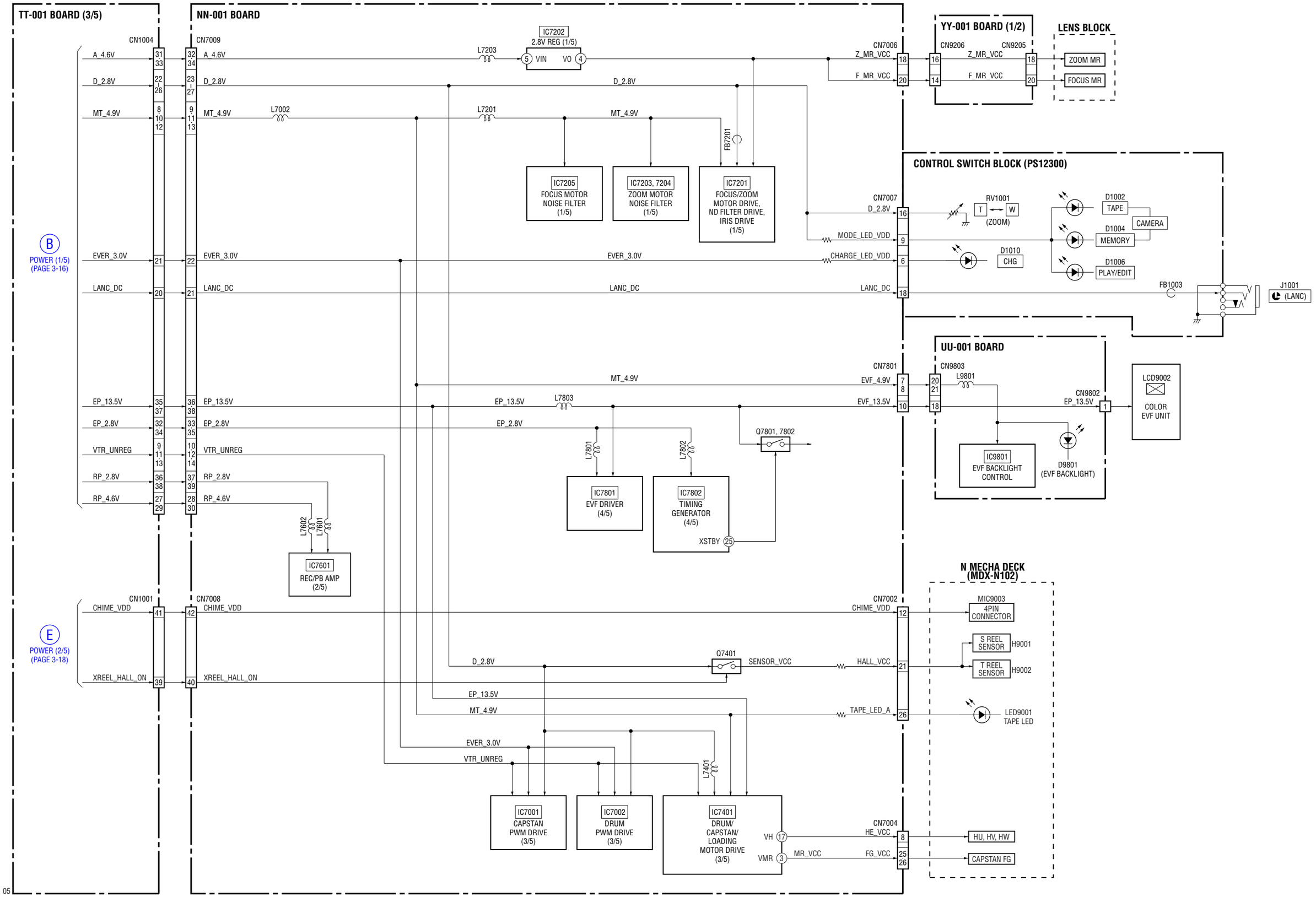


3-9. POWER BLOCK DIAGRAM (2/5) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

TT-001 BOARD (2/5)

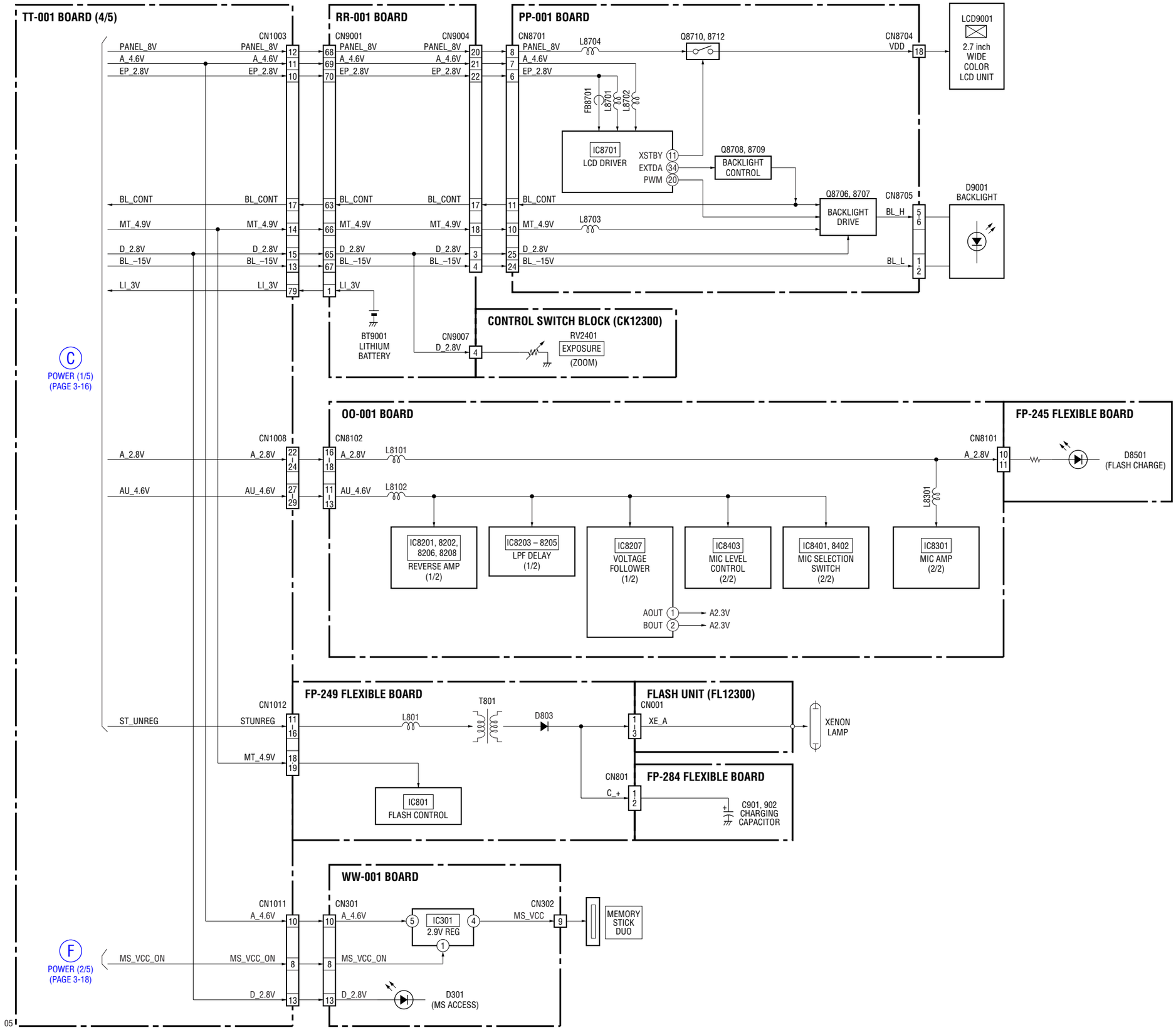


3-10. POWER BLOCK DIAGRAM (3/5) ( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



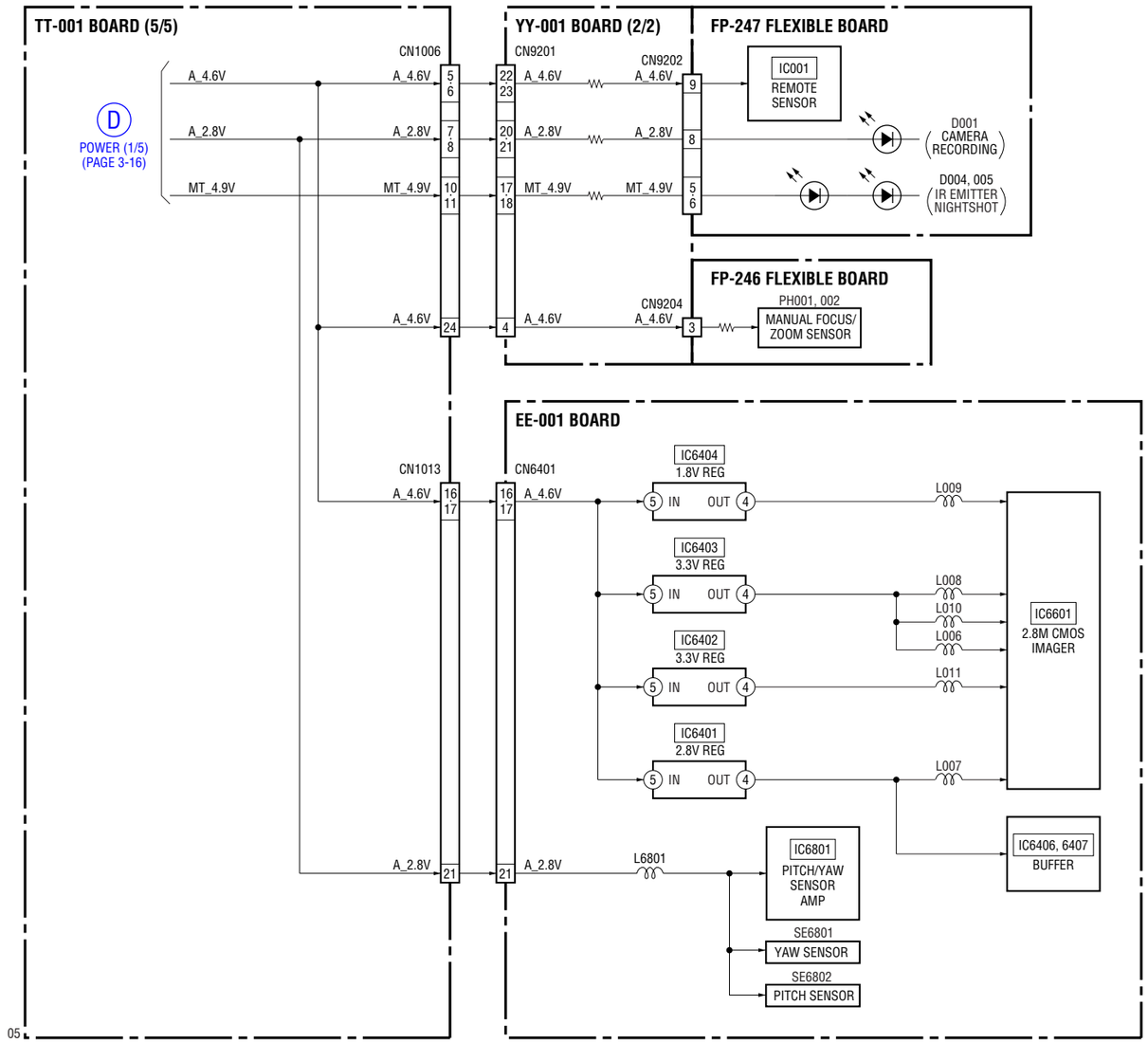
3-11. POWER BLOCK DIAGRAM (4/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



3-12. POWER BLOCK DIAGRAM (5/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM

FLAME SCHEMATIC DIAGRAM

FP-246 FLEXIBLE BOARD (MANUAL FOCUS/ ZOOM SENSOR)

FP-247 FLEXIBLE BOARD (REMOTE SENSOR, IR EMITTER)

FP-263 FLEXIBLE (EJECT SWITCH)

FP-031 FLEXIBLE BOARD

FP-032 FLEXIBLE BOARD

FP-228 FLEXIBLE BOARD

N MECHANISM DECK (MDX-N102)

VIDEO HEAD (DOD, EVEN)

M9002 DRUM MOTOR

M9003 LOADING MOTOR

M9001 CAPSTAN MOTOR

FP-260 FLEXIBLE

LCD9002 COLOR EVF UNIT

UU-001 BOARD (EVF, EVF BACKLIGHT)

LENS BLOCK

YY-001 BOARD (CONNECTION BOARD)

FP-264 FLEXIBLE

NN-001 BOARD

(1/5) (LENS DRIVE)
(2/5) (REC/PB AMP)
(3/5) (SERVO)
(4/5) (EVF DRIVE)
(5/5) (CONNECTOR)

CONTROL SWITCH BLOCK (PS12300)

EE-001 BOARD (CMOS IMAGER)

HARNESS (COAXIAL CABLE)

FP-256 FLEXIBLE

FP-261 FLEXIBLE BOARD (BATTERY TERMINAL)

BT1001 (BATTERY TERMINAL)

FP-262 FLEXIBLE BOARD (DC IN)

J1001 DC IN

FP-250 FLEXIBLE

FP-251 FLEXIBLE

FP-245 FLEXIBLE BOARD (MIC, JACK)

FLASH UNIT (FL12300)

FP-249 FLEXIBLE BOARD (FLASH DRIVE)

TT-001 BOARD

(1/21) (A/D CONVERTER)
(2/21) (CAMERA SIGNAL PROCESS)
(3/21) (MS SIGNAL PROCESS)
(4/21) (BASE BAND SIGNAL PROCESS)
(5/21) (HDV-MPEG VIDEO ENCODE)
(6/21) (SDRAM (VIDEO ENCODE))
(7/21) (HDV-MPEG VIDEO DECODE)
(8/21) (SDRAM (VIDEO DECODE))
(9/21) (MPEG AUDIO SIGNAL PROCESS)
(10/21) (HDV STREAM PROCESS)
(11/21) (DV SIGNAL PROCESS)
(12/21) (HDV/DV i.LINK INTERFACE)
(13/21) (VIDEO OUT,AUDIO IN/OUT)
(14/21) (DS CONTROL,HI CONTROL)
(15/21) (SDRAM (DIGITAL STILL))
(16/21) (CAMERA CONTROL)
(17/21) (MECHA CONTROL)
(18/21) (HDV-LSI CONTROL)
(19/21) (HI CONTROL)
(20/21) (DC/DC CONVERTER)
(21/21) (CONNECTOR)

FP-284 FLEXIBLE BOARD (CHARGING CAPACITOR)

WW-001 BOARD (MS CONNECTOR)

MEMORY STICK DUO

FP-255 FLEXIBLE

FP-252 FLEXIBLE

FP-254 FLEXIBLE

OO-001 BOARD (1/2) (NOISE CANCELER) (2/2) (MIC AMP)

CONTROL KEY BLOCK (SB9000)

PP-001 BOARD (LCD DRIVE)

FP-259 FLEXIBLE

2.7INCH WIDE COLOR LCD UNIT

LCD9001

TOUCH PANEL

D9001 BACKLIGHT

CONTROL SWITCH BLOCK (CK12300)

FP-248 FLEXIBLE BOARD (PANEL DETECT)

SP9001 SPEAKER

RR-001 BOARD (CONTROL SWITCH)

FP-258 FLEXIBLE

HH-001 BOARD (AV/COMPONENT MULTI CONNECTOR)

A/V OUT

COMPONENT OUT

HOT SHOE

FP-253 FLEXIBLE

II-001 BOARD (DV/USB CONNECTOR)

FP-257 FLEXIBLE

USB

DV

HDR-HC1/HC1E/HC1K/HC1EK_L2

4-2. SCHEMATIC DIAGRAMS

Link

PP-001 BOARD (LCD DRIVE)	FP-284 FLEXIBLE BOARD (CHARGING CAPACITOR)
RR-001 BOARD (CONTROL SWITCH)	FLASH UNIT (FL12300)
FP-248 FLEXIBLE BOARD (PANEL DETECT)	FP-250, FP-251 FLEXIBLE BOARD (TT-NN EXTENSION BOARD)
HH-001 BOARD (A/V COMPONENT MULTI CONNECTOR)	FP-252 FLEXIBLE BOARD (TT-RR EXTENSION BOARD)
II-001 BOARD (DV/USB CONNECTOR)	FP-253 FLEXIBLE BOARD (HOT SHOE)
WW-001 BOARD (MS CONNECTOR)	FP-261 FLEXIBLE BOARD (BATTERY TERMINAL)
UU-001 BOARD (EVF, EVF BACKLIGHT)	FP-262 FLEXIBLE BOARD (DC IN)
YY-001 BOARD (CONNECTOR BOARD)	FP-263 FLEXIBLE BOARD (EJECT SWITCH)
FP-246 FLEXIBLE BOARD (MANUAL FOCUS/ZOOM SENSOR)	FP-031, FP-032, FP-228 FLEXIBLE BOARD
FP-247 FLEXIBLE BOARD (REMOTE SENSOR, IR EMITTER)	CONTROL SWITCH BLOCK (CK12300)
FP-245 FLEXIBLE BOARD (MIC, JACK)	CONTROL SWITCH BLOCK (PS12300)
FP-249 FLEXIBLE BOARD (FLASH DRIVE)	CONTROL KYE BLOCK (SB9000)

COMMON NOTE FOR SCHEMATIC DIAGRAMS	WAVEFORMS

4-2. SCHEMATIC DIAGRAMS (ENGLISH)

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. pF : μμF. 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ=1000 Ω, MΩ=1000 kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

  Example C541 22U TA A / L452 10UH 2520

  C541: Kinds of capacitor, Case size
  L452: External dimensions (mm)
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination.
  Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B– Line
- : IN/OUT direction of (+,–) B LINE.
- : adjustment for repair.
- : not use circuit
- Circled numbers refer to waveforms.

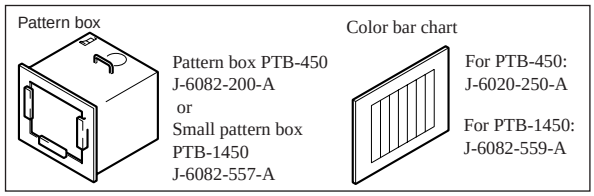
(Measuring conditions voltage and waveform)

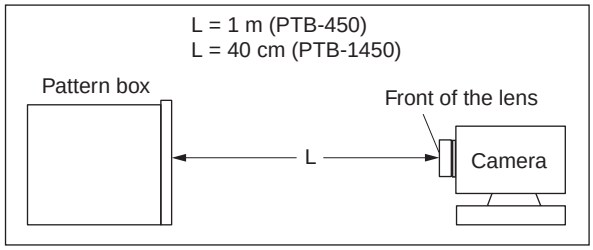
- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms.
  (VOM of DC 10 MΩ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions for Replacement of Imager

- If the imager has been replaced, carry out all the adjustments for the camera section.
- As the imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

1. Connection





2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

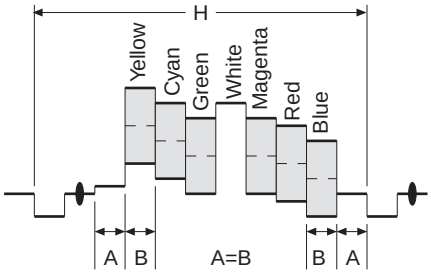


Fig. a (Video output terminal output waveform)

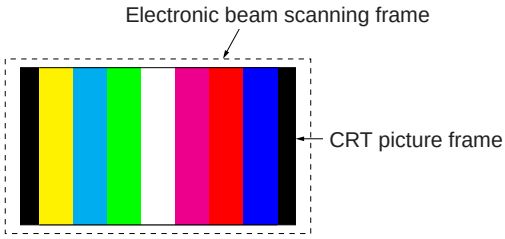


Fig.b (Picture on monitor TV)

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifie.

(JAPANESE)

回路図共通ノート
（他に必要なノートは各ブロックに記載してあります）
【回路図ノート】
・ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものはその耐圧を省略。単位はすべてμF（pはpF）。
・チップ抵抗で指示のないものは，1／10W以下。
kΩ＝1000Ω，MΩ＝1000kΩ
・チップ部品交換時の注意
取り外した部品は再使用せず，未使用の部品をご使用ください。
タンタルコンデンサのマイナス側は熱に弱いため注意してください。
・チップ部品には下記のように表示したものがあります。

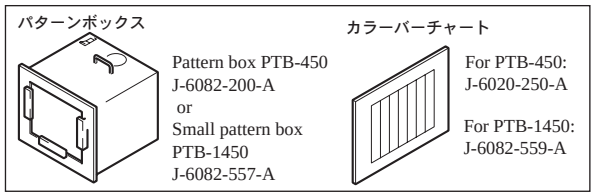
例	C 541	L 452
	22U	10UH
	TA A	2520
	↑ ↑	↑
	種類 ケースサイズ	外形寸法（mm）

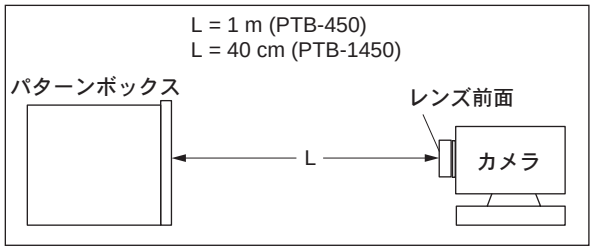
・抵抗，コンデンサ，ICなど定数にXXがあるものは，使用していない事を示しています。このため，使用していない回路が記載されている事があります。
・★印のある部品は，機種などにより異なりますので機能別マウント一覧表を参照してください。
・可変抵抗と半固定抵抗で，B特性の表示を省略。
・信号名表記について，下記のような場合があります。
XEDIT → $\overline{\text{EDIT}}$　　PB/XREC → PB/$\overline{\text{REC}}$
・ は不燃性抵抗。
・はヒューズ抵抗。
・はパネル表示名称。
・はB＋ライン。
・ はB－ライン。
・ はBライン（＋，－）の入出力方向を示す。
・ は調整名称。
・ は未使用回路。
・○番号は，波形図の照合番号。

【電圧・波形測定条件ノート】
・電圧値及び信号波形はパターンボックスのカラーバーチャートを被写体としたときの測定点対アース間の参考値。
（デジタルマルチメータ；入力インピーダンス　DC10MΩ使用）
・使用テスタの入力インピーダンスにより電圧値が多少異なります。

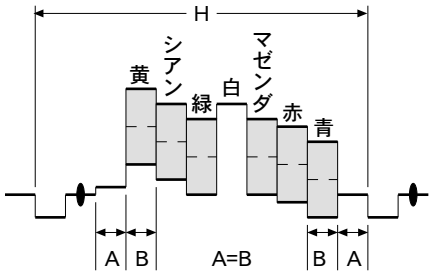
イメージャ交換時の注意
・イメージャを交換した場合は，カメラ部の全調整を行ってください。
・イメージャは構造上，静電気により破壊される恐れがあるため，MOS ICと同様に注意して取り扱ってください。
また，受光部にはゴミの付着，および強い光がはいることのないように注意してください。

1. 接続図

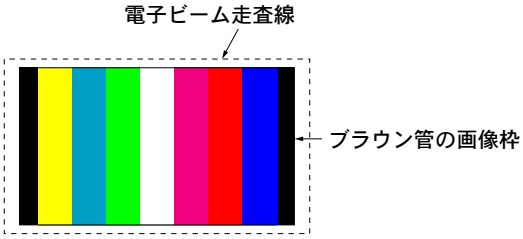




2. 図a及び図bの波形が得られるように画枠調整して下さい。



図a（映像入出力端子出力波形）



図b（テレビモニタの映像）

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定して下さい。

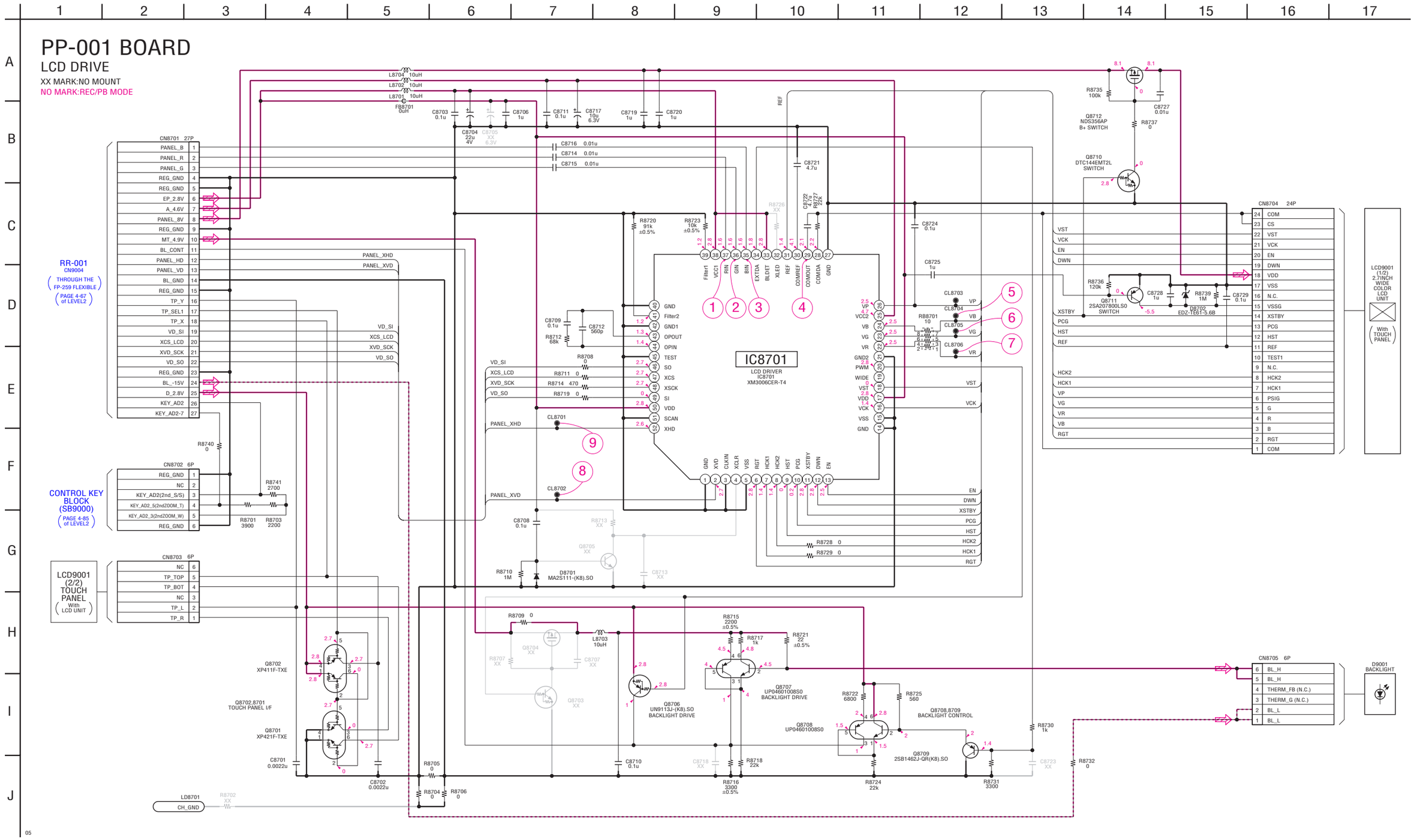
Schematic diagrams of the EE-001, TT-001, NN-001 and OO-001 boards are not shown.
Pages from 4-7 to 4-64 are not shown.

PP-001 BOARD

LCD DRIVE

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



• Refer to page 4-5 (English), 4-6 (Japanese) for mark ⚠.

RR-001 BOARD

CONTROL SWITCH

XX MARK:NO MOUNT

FP-252 FLEXIBLE (PAGE 4-79 of LEVEL2)

CN9001 80P

1	LI_3V	KEY_AD3	2
3	XBATT_INFO_SW	KEY_AD6	4
5	REG_GND	HI_XRESET	6
7	SP-	REG_GND	8
9	SP+	REG_GND	10
11	REG_GND	AUDIO_L_I/O	12
13	REG_GND	AUDIO_R_I/O	14
15	JACK_AD	REG_GND	16
17	REG_GND	S_C_I/O	18
19	VIDEO_I/O	S_Y_I/O	20
21	REG_GND	REG_GND	22
23	REG_GND	D3_LNO_Y	24
25	D3_LNO_PB	REG_GND	26
27	REG_GND	D3_LNO_PR	28
29	LINE_CNT1	REG_GND	30
31	LINE_CNT2	D3_CN	32
33	LINE_CNT3	REG_GND	34
35	REG_GND	USB_D-	36
37	REG_GND	USB_D+	38
39	USB_DET	REG_GND	40
41	REG_GND	REG_GND	42
43	TPA-	REG_GND	44
45	TPA+	REG_GND	46
47	TPB+	REG_GND	48
49	TPB-	REG_GND	50
51	REG_GND	VD_SO	52
53	XVD_SCK	XCS_LCD	54
55	VD_SI	TP_X	56
57	TP_SEL1	TP_Y	58
59	PANEL_VD	BL_GND	60
61	PANEL_HD	BL_GND	62
63	BL_CONT	KEY_AD2	64
65	D_2.8V	MT_4.9V	66
67	BL_-15V	PANEL_8V	68
69	A_4.6V	EP_2.8V	70
71	KEY_AD5	KEY_AD4	72
73	REG_GND	REG_GND	74
75	PANEL_B	REG_GND	76
77	PANEL_G	REG_GND	78
79	PANEL_R	N.C	80

PP-001 CN8701 (THROUGH THE FP-259 FLEXIBLE) (PAGE 4-65 of LEVEL2)

CN9004 27P

KEY_AD2-7	1	R9014 0
KEY_AD2	2	KEY_AD2
D_2.8V	3	D_2.8V
BL_-15V	4	BL_-15V
REG_GND	5	
VD_SO	6	VD_SO
XVD_SCK	7	XVD_SCK
XCS_LCD	8	XCS_LCD
VD_SI	9	VD_SI
TP_X	10	TP_X
TP_SEL1	11	TP_SEL1
TP_Y	12	TP_Y
REG_GND	13	
BL_GND	14	
PANEL_VD	15	XPVD
PANEL_HD	16	XPHD
BL_CONT	17	BL_CONT
MT_4.9V	18	MT_4.9V
REG_GND	19	
PANEL_8V	20	PANEL_8V
A_4.6V	21	A_4.6V
EP_2.8V	22	EP_2.8V
REG_GND	23	
REG_GND	24	
PANEL_G	25	PLGR
PANEL_R	26	PLRE
PANEL_B	27	PLBL

SP-, SP+, MULTIJACK_AD, VIDEO_I/O, D3_LNO_PB, LINE_CNT1, LINE_CNT2, LINE_CNT3, USB_DET, TPA-, TPA+, TPB+, TPB-, XVD_SCK, VD_SI, TP_SEL1, XPVD, XPHD, BL_CONT, D_2.8V, BL_-15V, A_4.6V, KEY_AD5, PLBL, PLGR, PLRE

KEY_AD3, KEY_AD6, AUDIO_L_I/O, AUDIO_R_I/O, S_C_I/O, S_Y_I/O, D3_LNO_Y, D3_LNO_PR, D3CN, USB_D-, USB_D+, VD_SO, XCS_LCD, TP_X, TP_Y, KEY_AD2, MT_4.9V, PANEL_8V, EP_2.8V, KEY_AD4

AUDIO_L_I/O FB9001, AUDIO_R_I/O FB9002, MULTIJACK_AD FB9003, VIDEO_I/O FB9004, S_C_I/O FB9005, S_Y_I/O FB9006

D3_LNO_Y R9001 0, D3_LNO_PB R9002 0, D3_LNO_PR R9003 0

LINE_CNT1 R9004 0, LINE_CNT2 R9005 0, LINE_CNT3 R9006 0, D3CN R9007 0

D9001 NSAD500H-T1-A

VDR901, VDR902, VDR903, VDR904, VDR905 XX, VDR906 XX

D9002 UDZSTE-178.2B, D9003 UDZSTE-178.2B, D9004 UDZSTE-178.2B, D9005 UDZSTE-178.2B

R9008 0

LND901 CHASSIS_GND

CN9002 22P

1	REG_GND	
2	REG_GND	
3	AUDIO_L_I/O	
4	AUDIO_R_I/O	
5	REG_GND	
6	JACK_AD	
7	REG_GND	
8	VIDEO_I/O	
9	S_C_I/O	
10	S_Y_I/O	
11	REG_GND	
12	D3_LNO_Y	
13	REG_GND	
14	D3_LNO_PB	
15	REG_GND	
16	D3_LNO_PR	
17	REG_GND	
18	LINE_CNT1	
19	LINE_CNT2	
20	LINE_CNT3	
21	D3_CN	
22	REG_GND	

HH-001 CN101 (THROUGH THE FP-258 FLEXIBLE) (PAGE 4-69 of LEVEL2)

CN9003 14P

1	REG_GND	
2	REG_GND	
3	USB_D-	
4	USB_D+	
5	REG_GND	
6	USB_DET	
7	REG_GND	
8	REG_GND	
9	TPA-	
10	TPA+	
11	TPB+	
12	TPB-	
13	REG_GND	
14	REG_GND	

II-001 CN102 (THROUGH THE FP-257 FLEXIBLE) (PAGE 4-69 of LEVEL2)

USB_D-, USB_D+, USB_DET, TPA-, TPA+, TPB+, TPB-

R9010 10k, LF9002 0uH, R9009 10k, RB9021 0

D9006 1SS357(T3SONY1), D9007 NSAD500H-T1-A, D9008 MAZS082008SO, D9009 MAZS082008SO, D9010 MAZS082008SO, D9011 MAZS082008SO, R9011 0

LND902 CHASSIS_GND

CN9006 2P

1	SP-	SP9001 SPEAKER
2	SP+	

CONTROL SWITCH BLOCK (CK12300) (PAGE 4-85 of LEVEL2)

CN9007 10P

REG_GND	1	
KEY_AD3	2	
KEY_AD3-4	3	
D_2.8V	4	D_2.8V
KEY_AD6	5	KEY_AD6
KEY_AD3-3	6	
KEY_AD3-2	7	
KEY_AD3-5	8	KEY_AD3
KEY_AD3-6	9	
REG_GND	10	

R9020 8200, R9019 3900, R9018 2200, R9017 1500, R9015 1200

D9017 MAZW082H0LS0

R9012 27k, D9012 MA8062-M-TX, S9003 AUTO LOCK ON → OFF, S9002 DISPLAY/ BATT INFO, S9001 RESET, R9013 0

D9013 MA8062-M-TX, D9014 MA8062-M-TX

VDR907

BT9001 LITHIUM BATTERY

LND903 CHASSIS_GND, R9016 0

D9015 MA8062-M-TX, D9016 MA8062-M-TX

CN9005 6P

6	REG_GND	
5	KEY_AD5	
4	REG_GND	
3	KEY_AD4	
2	REG_GND	
1	REG_GND	

FP-248 FLEXIBLE BOARD

PANEL DETECT

(FP-248 FLEXIBLE BOARD is replaced as block, so that PRINTED WIRING BOARD is omitted.)

REG_GND 6, KEY_AD5 5, REG_GND 4, KEY_AD4 3, REG_GND 2, REG_GND 1, CHASSIS_GND

S002 PANEL OPEN/CLOSE

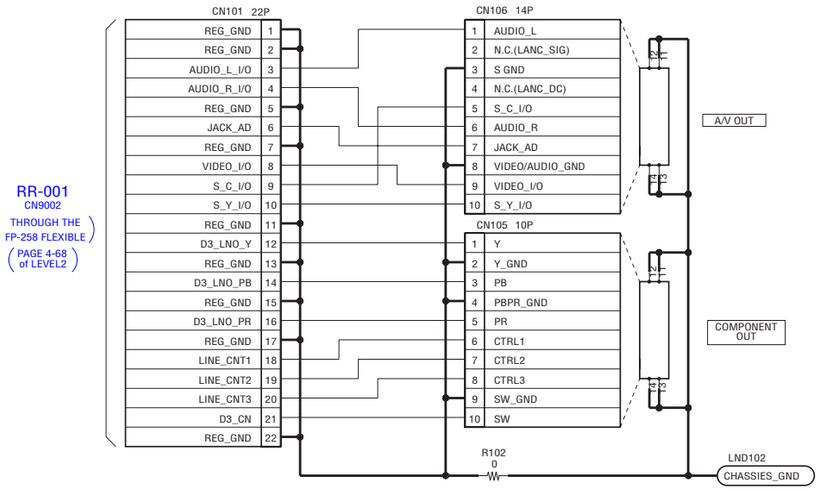
S001 (PANEL REVERS)

05

HH-001 BOARD

AV/COMPONENT MULTI CONNECTOR

XX MARK:NO MOUNT

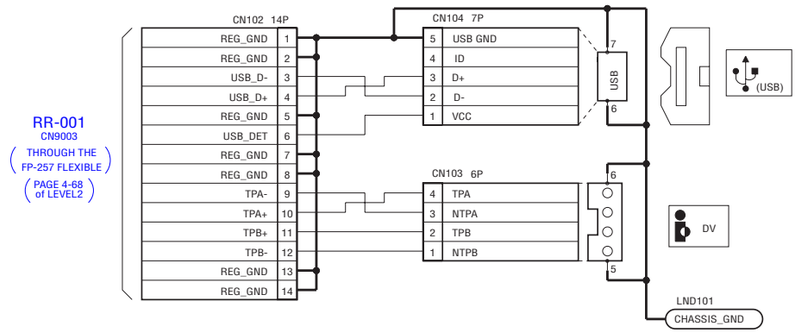


05

II-001 BOARD

DV/USB CONNECTOR

XX MARK:NO MOUNT



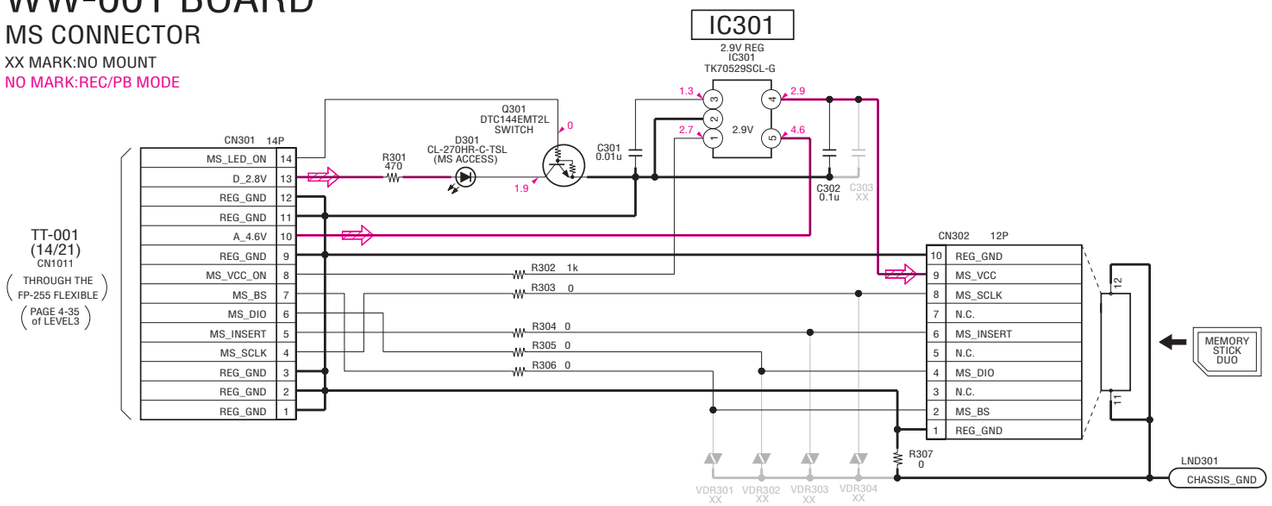
05

WW-001 BOARD

MS CONNECTOR

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



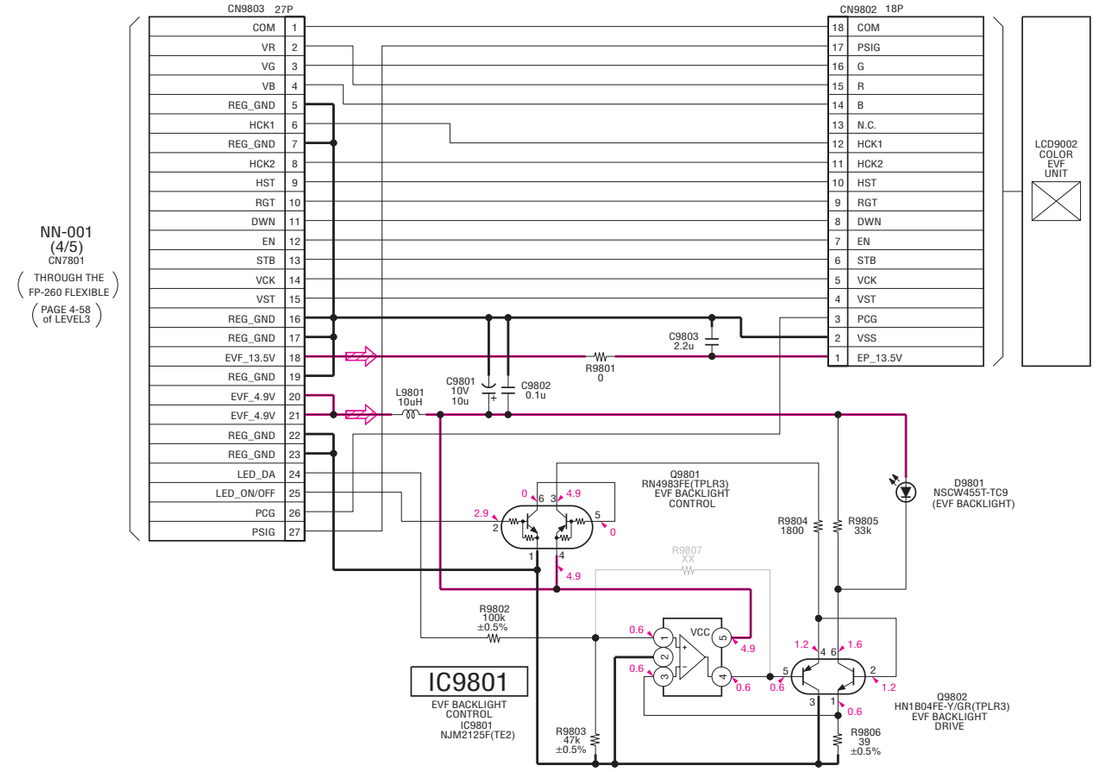
05

UU-001 BOARD

EVF, EVF BACKLIGHT

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



05

YY-001 BOARD
CONNECTION BOARD

CN9201 27P

REG_GND	27	
REG_GND	26	
REG_GND	25	
SIRCS_SIG	24	
A_4.6V	23	
A_4.6V	22	
A_2.8V	21	
A_2.8V	20	
XF_TALLY_LED	19	
MT_4.9V	18	
MT_4.9V	17	
N.C.	16	
MT_GND	15	
MT_GND	14	
IR_ON	13	
REG_GND	12	
REG_GND	11	
REG_GND	10	
REG_GND	9	
REG_GND	8	
REG_GND	7	
MF_B	6	
MF_A	5	
A_4.6V	4	
MF_LED	3	
REG_GND	2	
REG_GND	1	

TT-001
(16/21)
CN1006
THROUGH THE FP-256 FLEXIBLE
PAGE 4-40 of LEVEL3

CN9202 12P

12	REG_GND	
11	REG_GND	
10	SIRCS_SIG	
9	A_4.6V	
8	A_2.8V	
7	XF_TALLY_LED	
6	MT_4.9V	
5	MT_4.9V	
4	N.C.	
3	MT_GND	
2	MT_GND	
1	IR_ON	

R9207 47
R9211 680
R9208 56
R9209 56
C9201 1u

CN9204 6P

1	MF_B	
2	MF_A	
3	A_4.6V	
4	MF_LED	
5	REG_GND	
6	REG_GND	

REG_GND
R9206 0
D9202 MA8062-M-TX
D9203 MAZW082H0LS0
R9205 0
LND921
CHASSIS_GND

CN9205 33P

I_DRIVE-	1	
I_BIAS+	2	
I_HALL+	3	
I_BIAS-	4	
I_HALL-	5	
NC_GND	6	
I_DRIVE+	7	
ND_DRIVE-	8	
ND_BIAS-	9	
ND_HALL-	10	
ND_BIAS+	11	
ND_HALL+	12	
NC_GND	13	
ND_DRIVE+	14	
Z_MR_GND	15	
Z_MR_A	16	
Z_MR_B	17	
Z_MR_VCC	18	
F_MR_B	19	
F_MR_VCC	20	
F_MR_A	21	
F_MR_GND/TEMP_GND	22	
TEMP_OUT	23	
FOCUS+	24	
FOCUS-	25	
NF_DRIVE+	26	
NF_DRIVE+	27	
NF_DRIVE-	28	
NF_DRIVE-	29	
ZOOM_A	30	
ZOOM_B	31	
ZOOM_XA	32	
ZOOM_XB	33	

CN9206 33P

33	I_DRIVE-	
32	I_BIAS+	
31	I_HALL+	
30	I_BIAS-	
29	I_HALL-	
28	NC_GND	
27	I_DRIVE+	
26	ND_DRIVE-	
25	ND_BIAS-	
24	ND_HALL-	
23	ND_BIAS+	
22	ND_HALL+	
21	NC_GND	
20	ND_DRIVE+	
19	Z_MR_GND	
18	Z_MR_A	
17	Z_MR_B	
16	Z_MR_VCC	
15	F_MR_B	
14	F_MR_VCC	
13	F_MR_A	
12	F_MR_GND/TEMP_GND	
11	TEMP_OUT	
10	FOCUS+	
9	FOCUS-	
8	NF_DRIVE+	
7	NF_DRIVE+	
6	NF_DRIVE-	
5	NF_DRIVE-	
4	ZOOM_A	
3	ZOOM_B	
2	ZOOM_XA	
1	ZOOM_XB	

LENS BLOCK

LENS BLOCK is replaced as block, so that there PRINTED WIRING BOARD and SCHEMATIC DIAGRAM are omitted.

NN-001
(1/5)
CN7006
THROUGH THE FP-264 FLEXIBLE
PAGE 4-51 of LEVEL3

FP-247 FLEXIBLE BOARD
REMOTE SENSOR, IR EMITTER

XX MARK:NO MOUNT
NO MARK:REC/PB MODE

REG_GND	12	
REG_GND	11	
SIRCS_SIG	10	
A_4.6V	9	
A_2.8V	8	
F_TALLY_LED	7	
MT_4.9V	6	
MT_4.9V	5	
N.C	4	
MT_GND	3	
MT_GND	2	
IR_ON	1	

R008 XX
CHASSIS_GND
C001 4.7u
IC001
REMOTE SENSOR
IC001
RS-770
GND VCC GND OUT
D001 SML-310LTT86 (CAMERA RECORDING)
D003 MA111-(K8).S0
C002 10u
R005 1k
Q001 2SC5585H-T2L LED DRIVE
D005 DCZ2805
D004 DCZ2805
D004,005 (IR EMITTER /NIGHTSHOT)

FP-246 FLEXIBLE BOARD
MANUAL FOCUS/ZOOM SENSOR

XX MARK:NO MOUNT
NO MARK:REC/PB MODE

MF_B	1	
MF_A	2	
A_4.6V	3	
MF_LED	4	
REG_GND	5	
REG_GND	6	

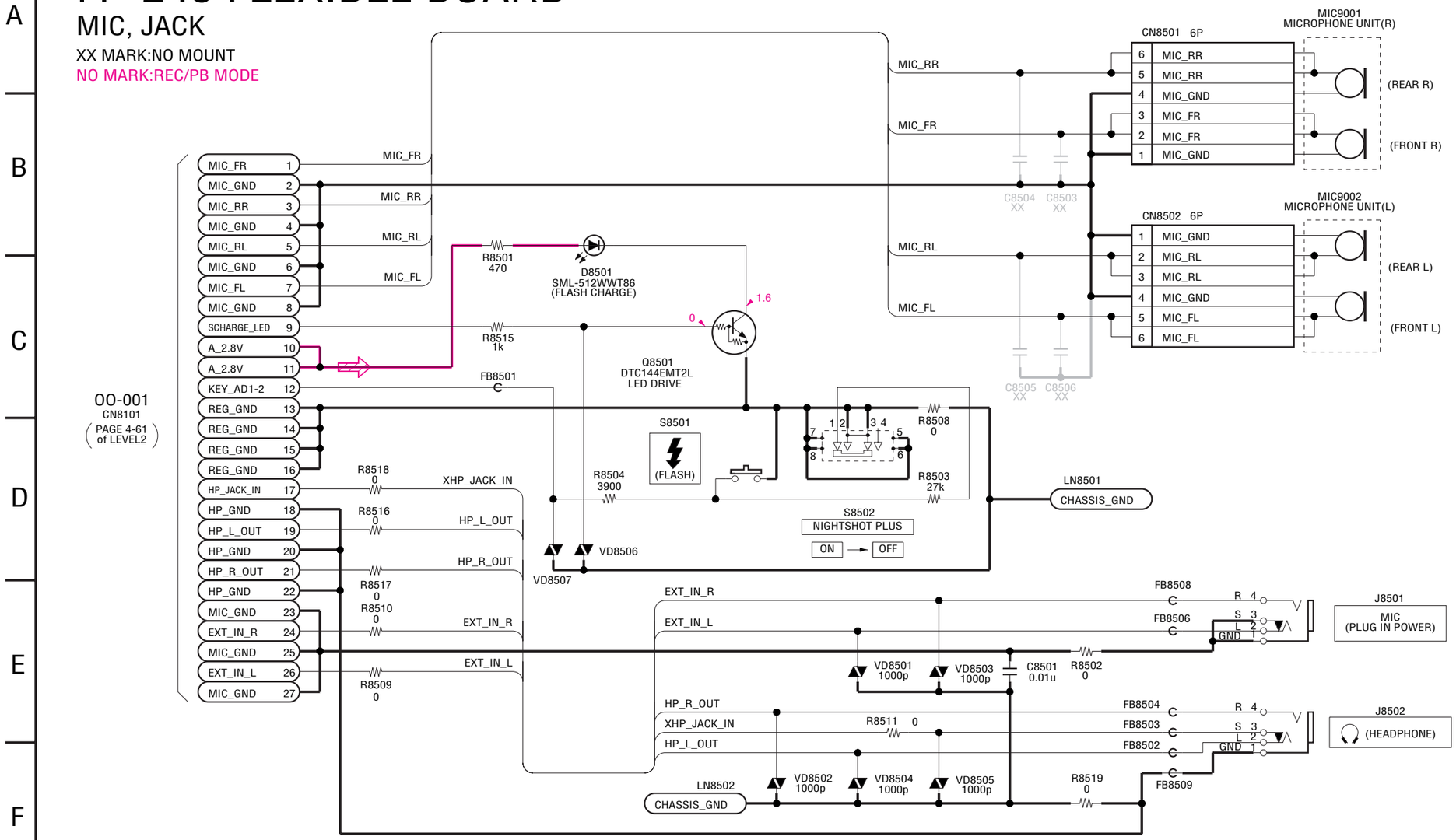
MF_B
MF_A
A_4.6V
MF_LED
R001 330
PH001 GP1S092HCPI
PH002 GP1S092HCPI
PH001,002 (MANUAL FOCUS /ZOOM SENSOR)

FP-245 FLEXIBLE BOARD

MIC, JACK

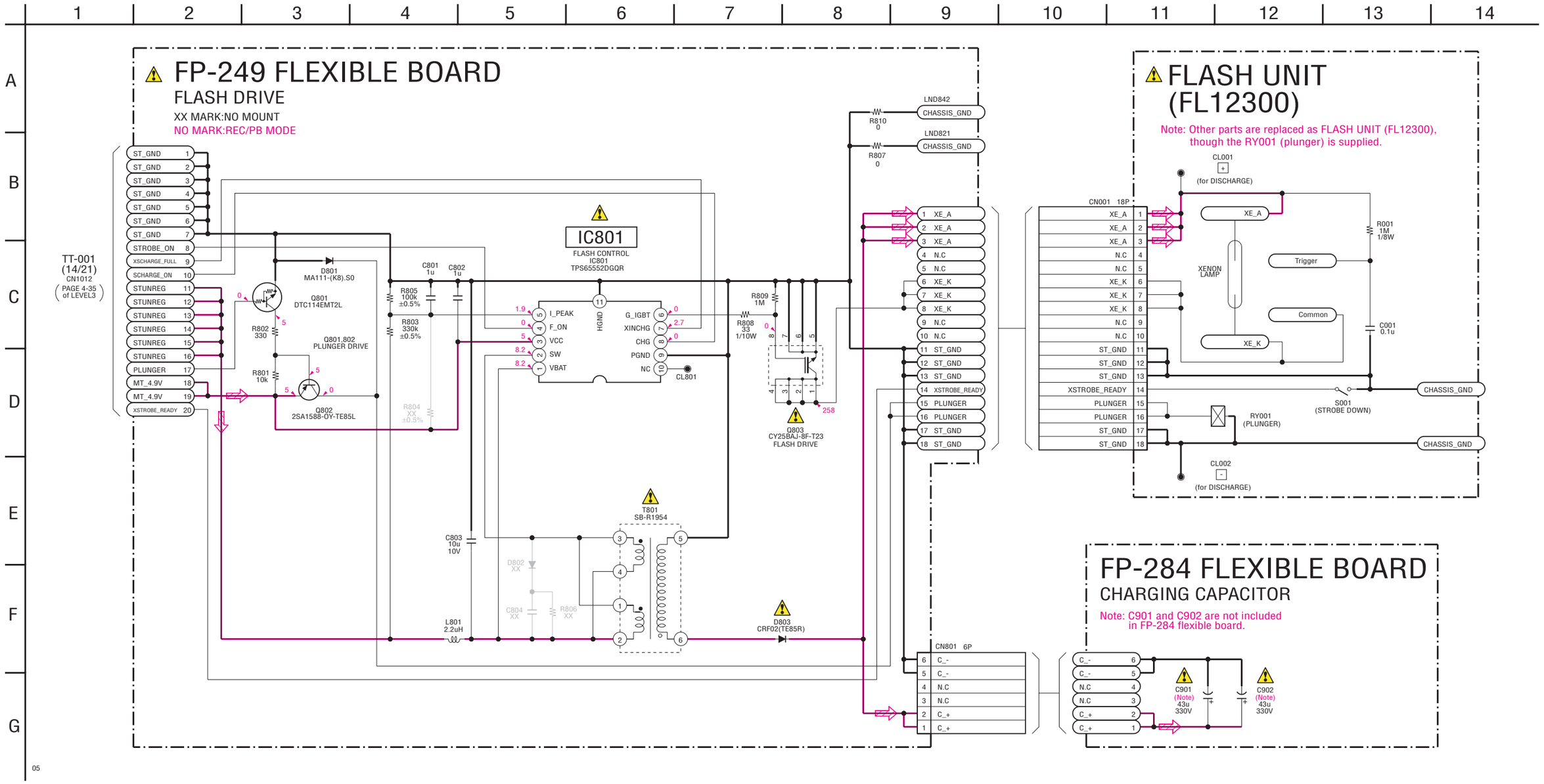
XX MARK:NO MOUNT

NO MARK:REC/PB MODE



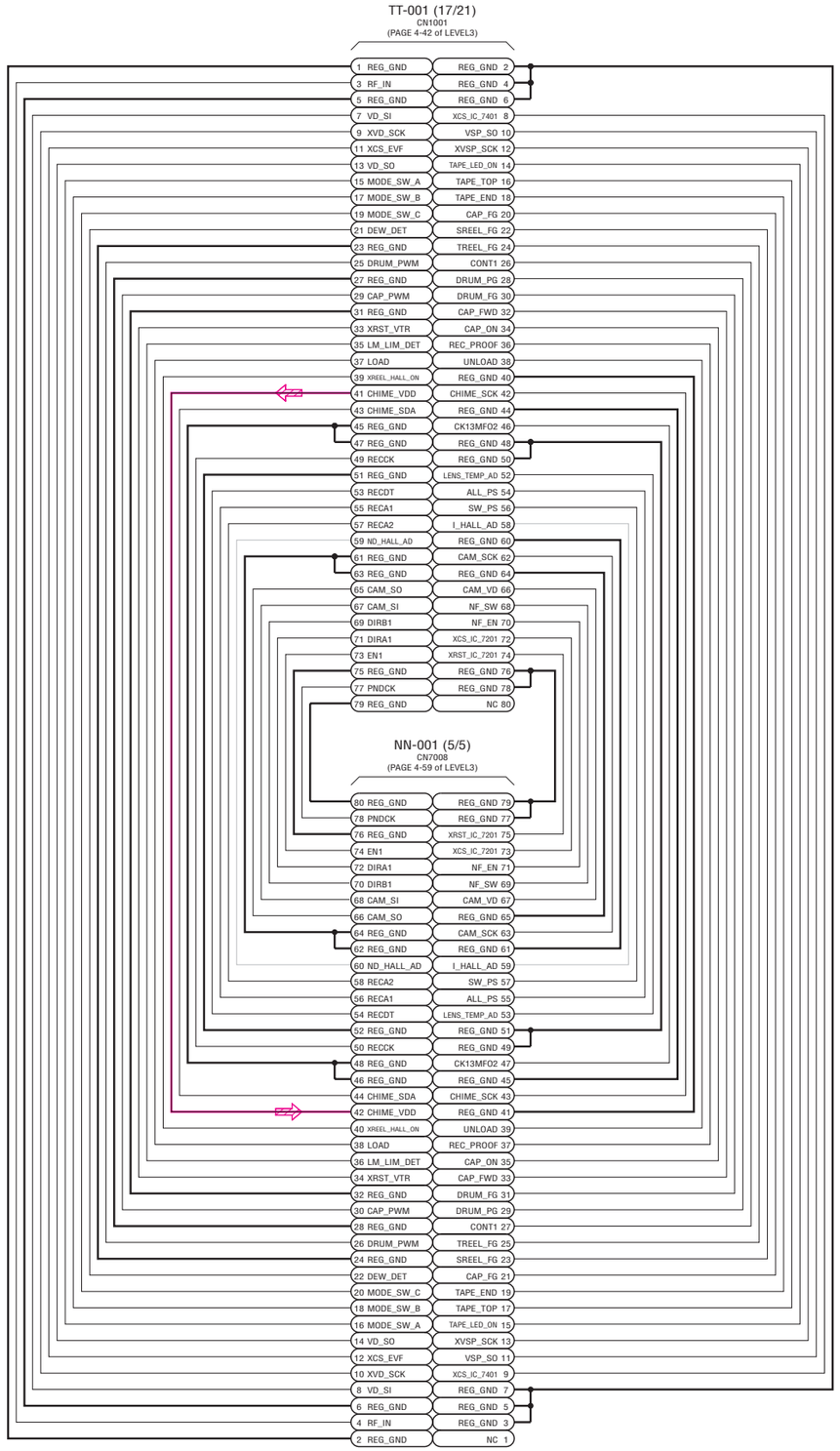
05

• Refer to page 4-5 (English), 4-6 (Japanese) for mark ⚠.



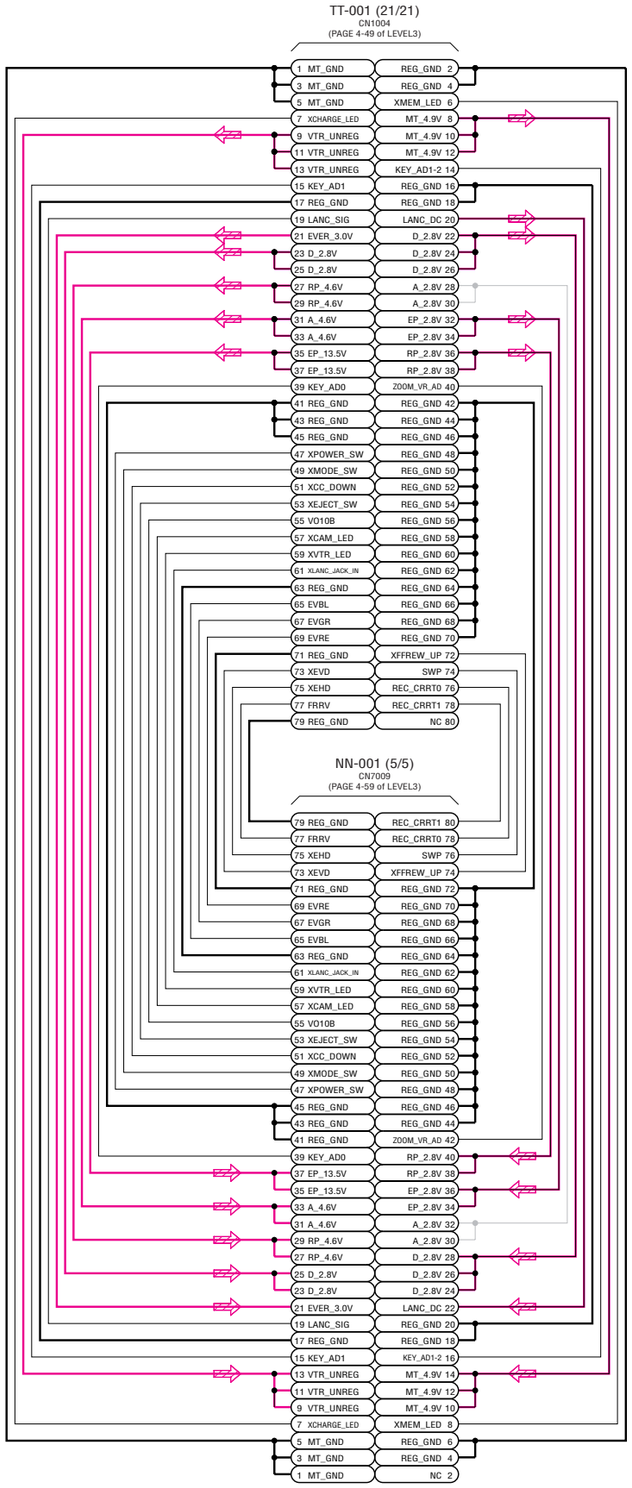
FP-250 FLEXIBLE BOARD

TT-NN EXTENSION BOARD 1



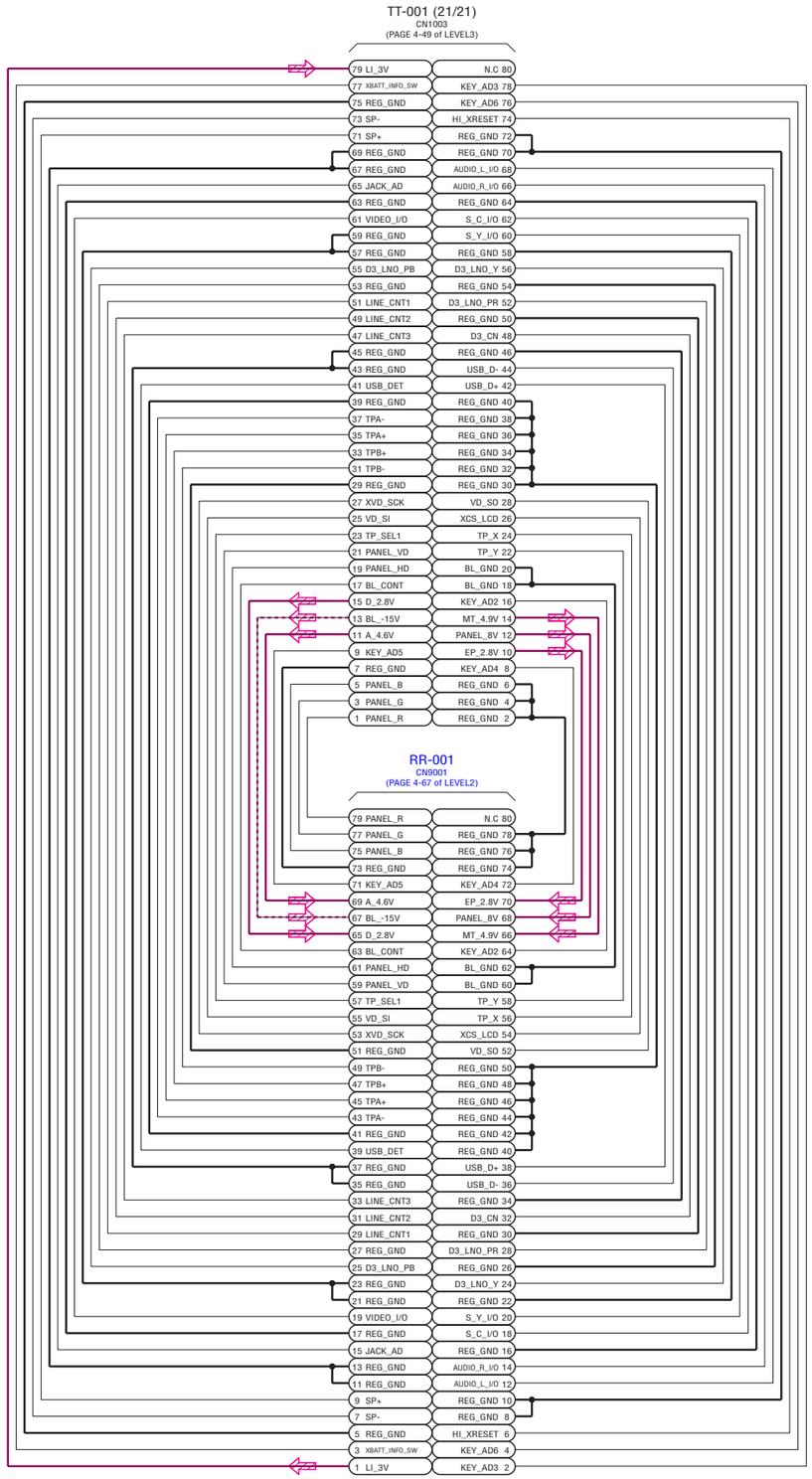
FP-251 FLEXIBLE BOARD

TT-NN EXTENSION BOARD 2



FP-252 FLEXIBLE BOARD

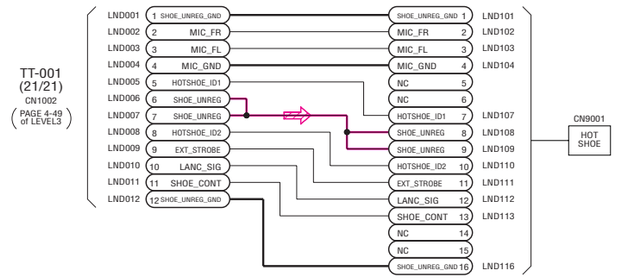
TT-RR EXTENSION BOARD



05

FP-253 FLEXIBLE BOARD

HOT SHOE

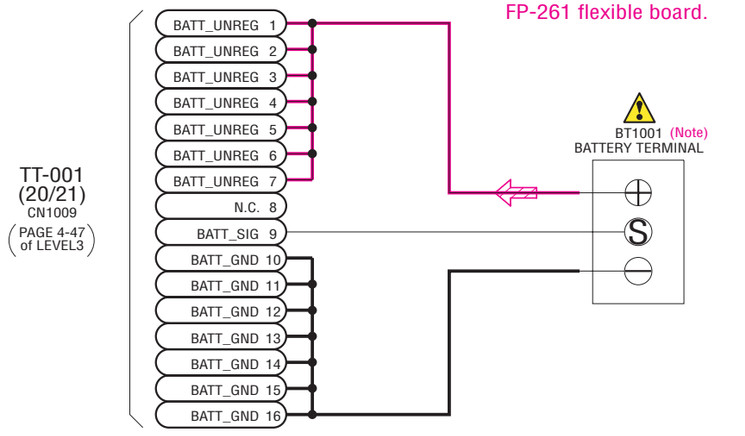


05

FP-261 FLEXIBLE BOARD

BATTERY TERMINAL

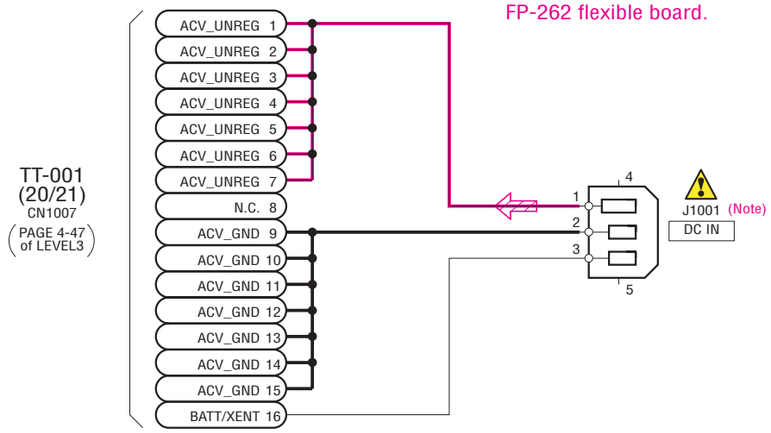
Note: BT1001 is not included in FP-261 flexible board.



FP-262 FLEXIBLE BOARD

DC IN

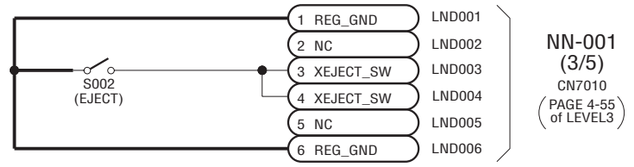
Note: J1001 is not included in FP-262 flexible board.

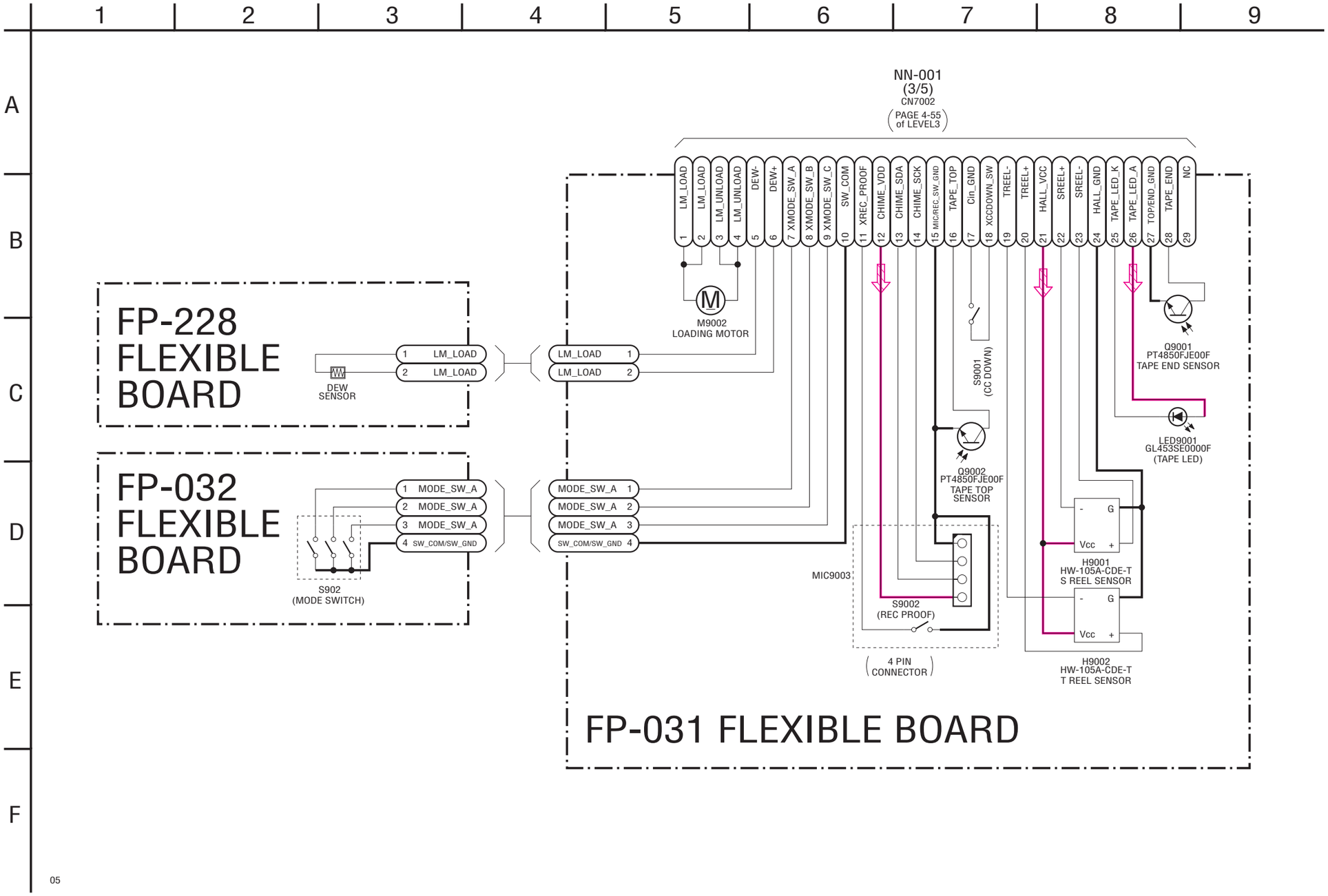


FP-263 FLEXIBLE BOARD

EJECT SWITCH

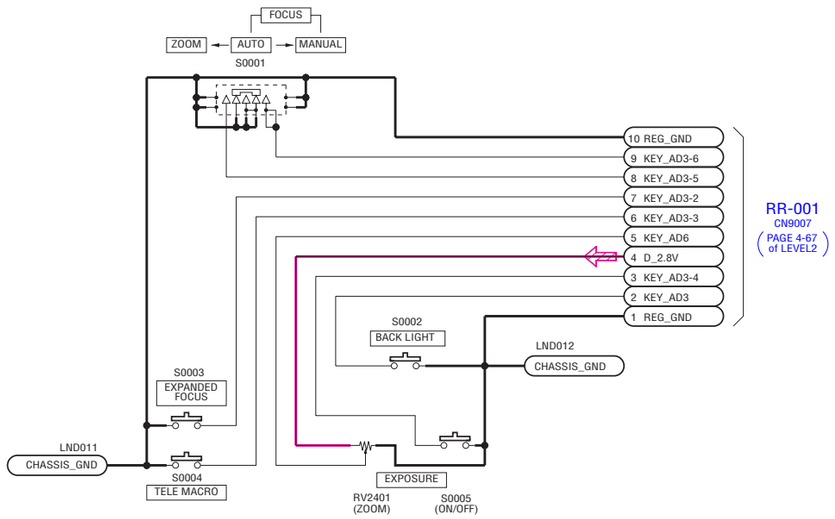
FP-263 FLEXIBLE BOARD is replaced as block, so that PRINTED WIRING BOARD is omitted.




1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
NN-001
(3/5)
CN7002
PAGE 4-55
of LEVEL3
1 LM_LOAD
2 LM_LOAD
3 LM_UNLOAD
4 LM_UNLOAD
5 DEW-
6 DEW+
7 XMODE_SW_A
8 XMODE_SW_B
9 XMODE_SW_C
10 SW_COM
11 XREC_PROOF
12 CHIME_VDD
13 CHIME_SDA
14 CHIME_SCK
15 MIC/REC_SW_GND
16 TAPE_TOP
17 Cin_GND
18 XCCDOWN_SW
19 TREEL-
20 TREEL+
21 HALL_VCC
22 SREEL+
23 SREEL-
24 HALL_GND
25 TAPE_LED_K
26 TAPE_LED_A
27 TOP/END_GND
28 TAPE_END
29 NC
M9002
LOADING MOTOR
Q9001
PT4850FJE00F
TAPE END SENSOR
LED9001
GL453SE0000F
(TAPE LED)
S9001
(CC DOWN)
Q9002
PT4850FJE00F
TAPE TOP
SENSOR
H9001
HW-105A-CDE-T
S REEL SENSOR
MIC9003
S9002
(REC PROOF)
4 PIN
CONNECTOR
H9002
HW-105A-CDE-T
T REEL SENSOR
FP-031 FLEXIBLE BOARD
FP-228
FLEXIBLE
BOARD
1 LM_LOAD
2 LM_LOAD
DEW
SENSOR
LM_LOAD 1
LM_LOAD 2
FP-032
FLEXIBLE
BOARD
1 MODE_SW_A
2 MODE_SW_A
3 MODE_SW_A
4 SW_COM/SW_GND
S902
(MODE SWITCH)
MODE_SW_A 1
MODE_SW_A 2
MODE_SW_A 3
SW_COM/SW_GND 4
05

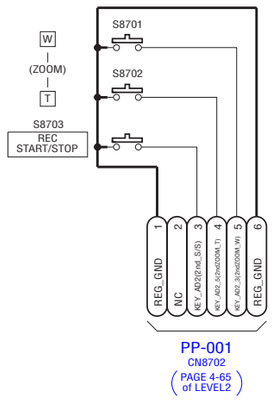
CONTROL SWITCH BLOCK (CK12300)

(CONTROL SWITCH BLOCK (CK12300) is replaced as block, so that PRINTED WIRING BOARD is omitted.)



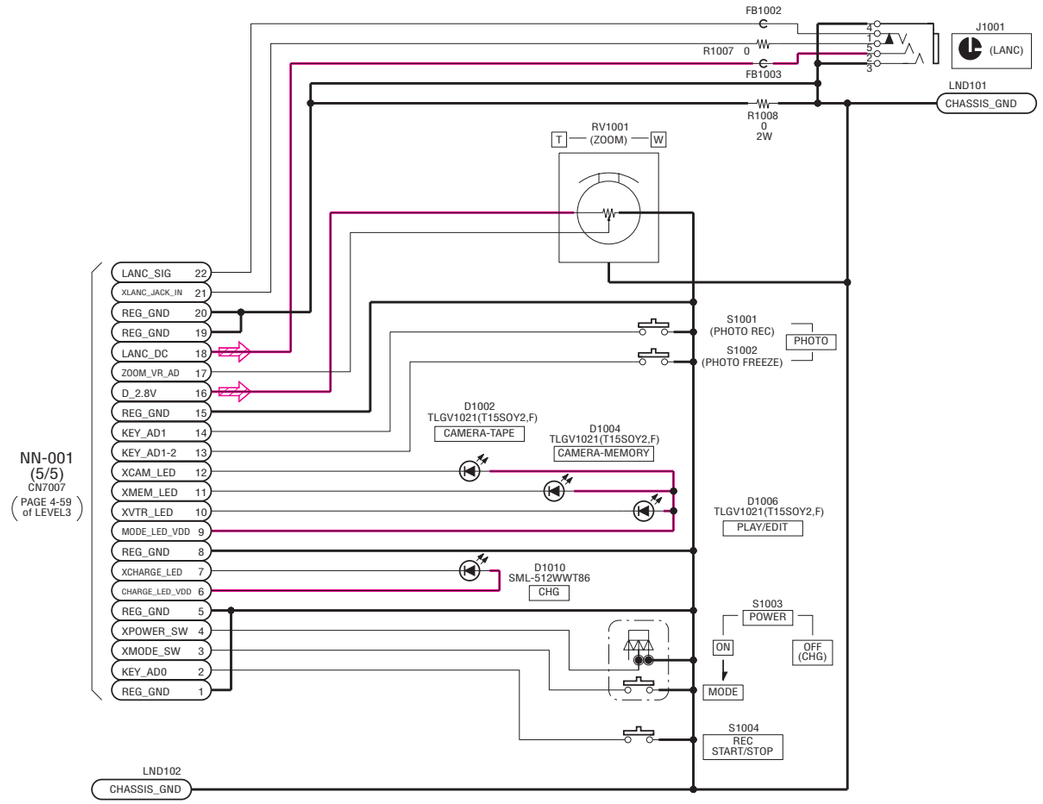
CONTROL KEY BLOCK (SB9000)

(CONTROL KEY BLOCK (SB9000) is replaced as block, so that PRINTED WIRING BOARD is omitted.)



CONTROL SWITCH BLOCK (PS12300)

(CONTROL SWITCH BLOCK (PS12300) is replaced as block, so that PRINTED WIRING BOARD is omitted.)



4-3. PRINTED WIRING BOARDS

Link

PP-001 BOARD	FP-246 FLEXIBLE BOARD
HH-001 BOARD	FP-247 FLEXIBLE BOARD
II-001 BOARD	FP-249 FLEXIBLE BOARD
RR-001 BOARD	FP-261 FLEXIBLE BOARD
WW-001 BOARD	FP-262 FLEXIBLE BOARD
UU-001 BOARD	FP-284 FLEXIBLE BOARD
YY-001 BOARD	FLASH UNIT (FL12300)
FP-245 FLEXIBLE BOARD	FP-031, FP-032, FP-228 FLEXIBLE BOARD

COMMON NOTE FOR PRINTED WIRING BOARDS	WAVEFORMS
MOUNTED PARTS LOCATION	

4-3. PRINTED WIRING BOARDS

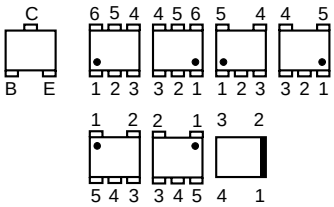
(ENGLISH)

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

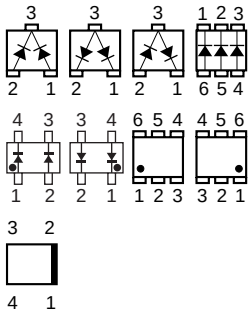
- : Uses unleaded solder.
- : Circuit board
  : Flexible board
  Pattern from the side which enables seeing.
  : pattern of the rear side
  (The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are a few cases that the part printed on diagram isn't mounted in this model.
- : panel designation

- Chip parts.

Transistor



Diode



(JAPANESE)

プリント図共通ノート
【プリント図ノート】

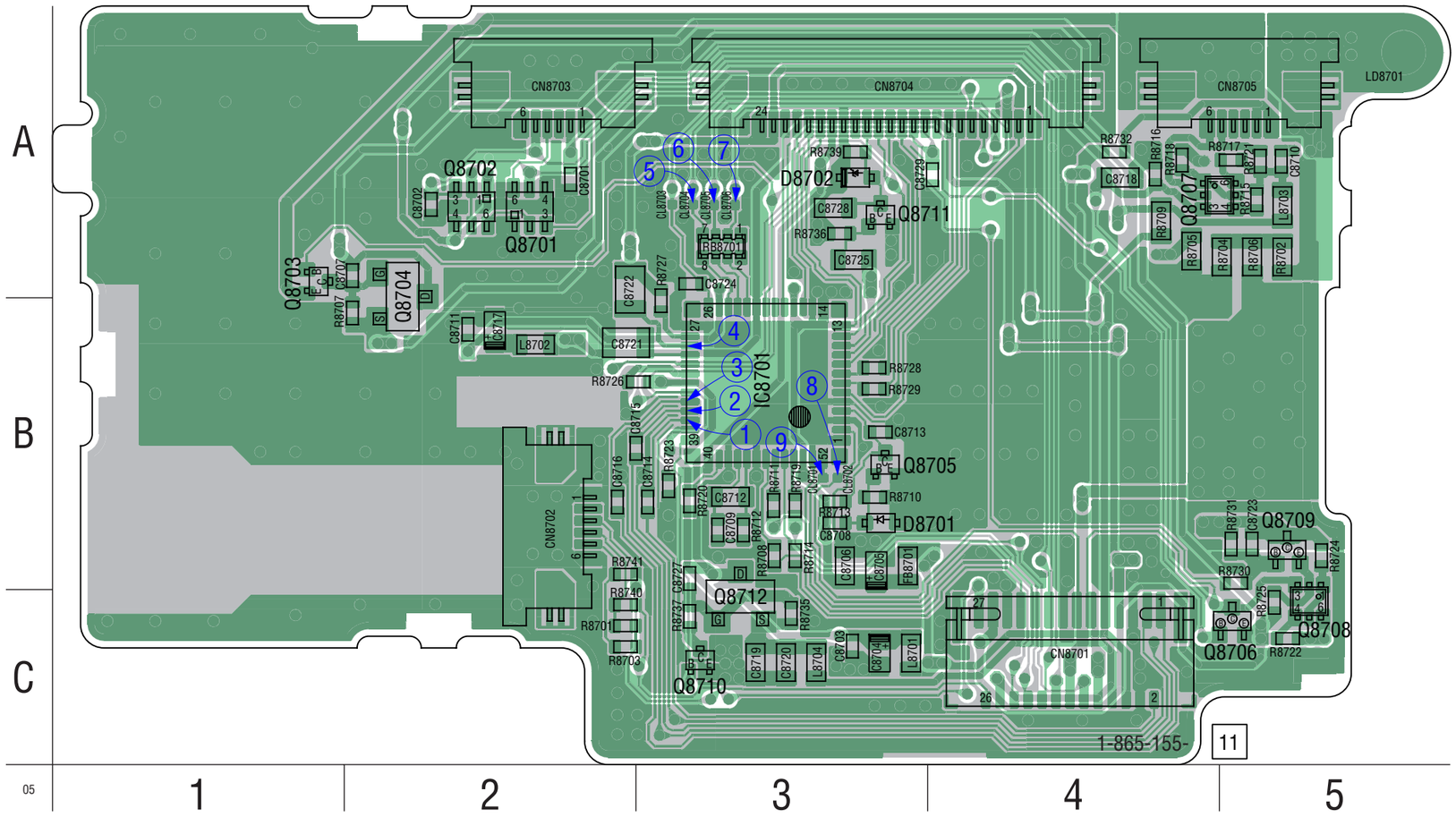
- ：無鉛半田を使用しています。
- ：基板
  ：フレキシブル配線板
  見ている面側のパターン。
  ：裏側のパターン
  （他のパターンについては表示されていません）
- スルーホールは省略。
- ○番号は波形図の照合番号。
- プリント図には，本機で使用していない部品が記載されている場合があります。
- はパネル表示名称。

Schematic diagrams of the EE-001, TT-001, NN-001 and OO-001 boards are not shown.
Pages from 4-89 to 4-100 are not shown.

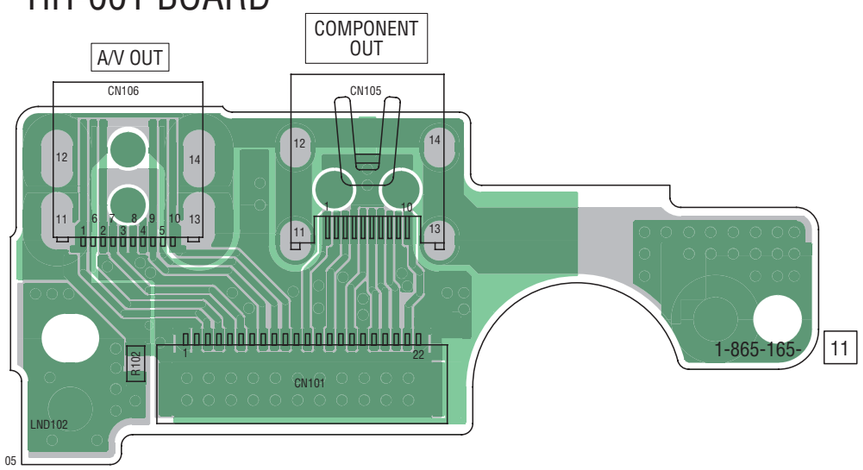
PP-001 (2 layers), HH-001 (2 layers), II-001 (2 layers)

: Uses unleaded solder.

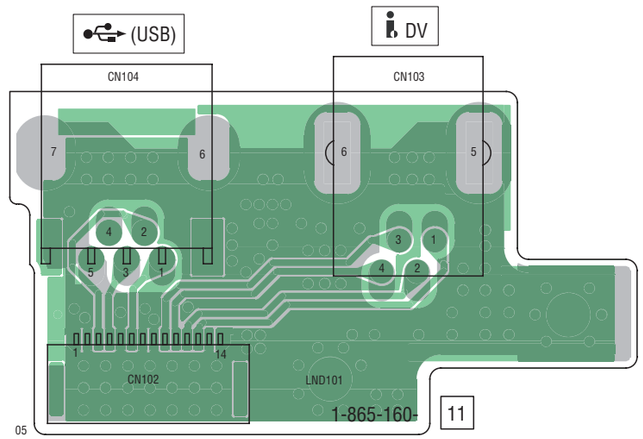
PP-001 BOARD



HH-001 BOARD



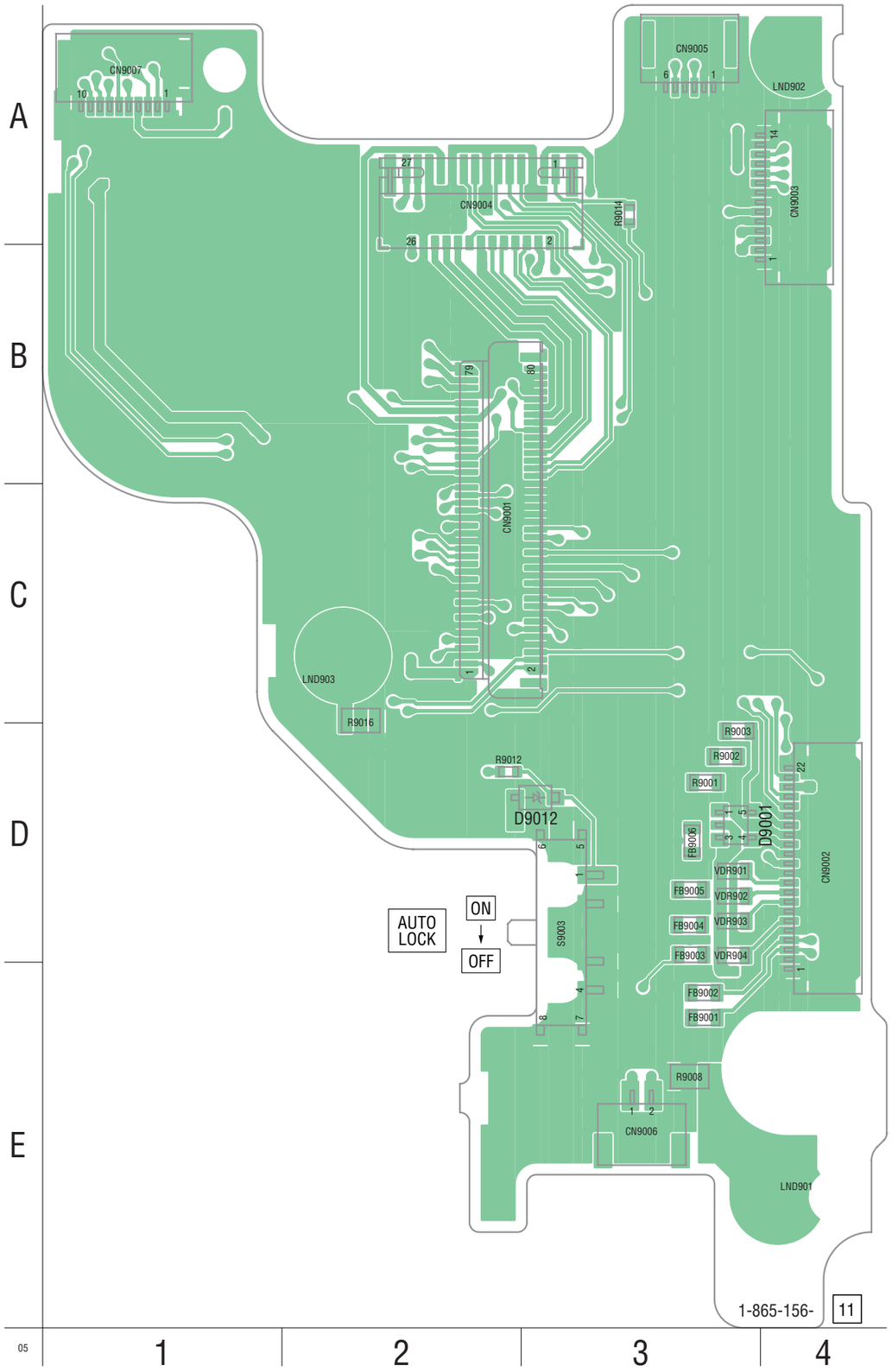
II-001 BOARD



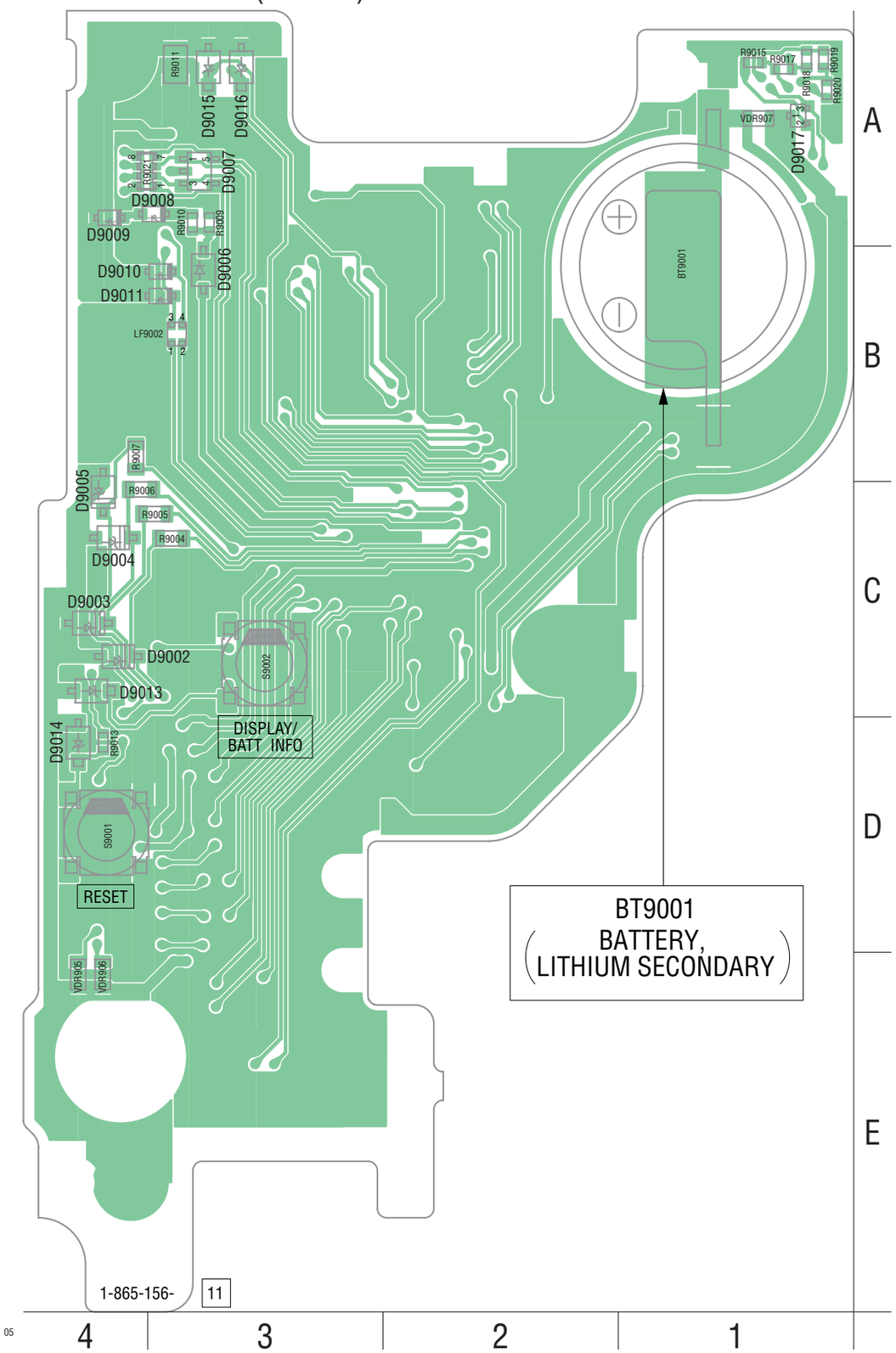
RR-001 (2 layers)

: Uses unleaded solder.

RR-001 BOARD (SIDE A)



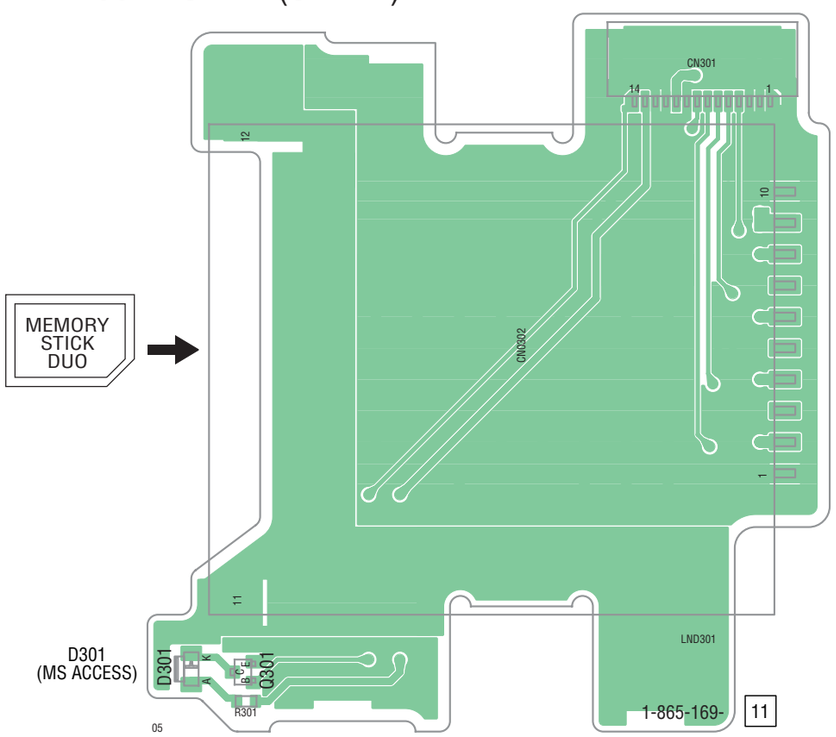
RR-001 BOARD (SIDE B)



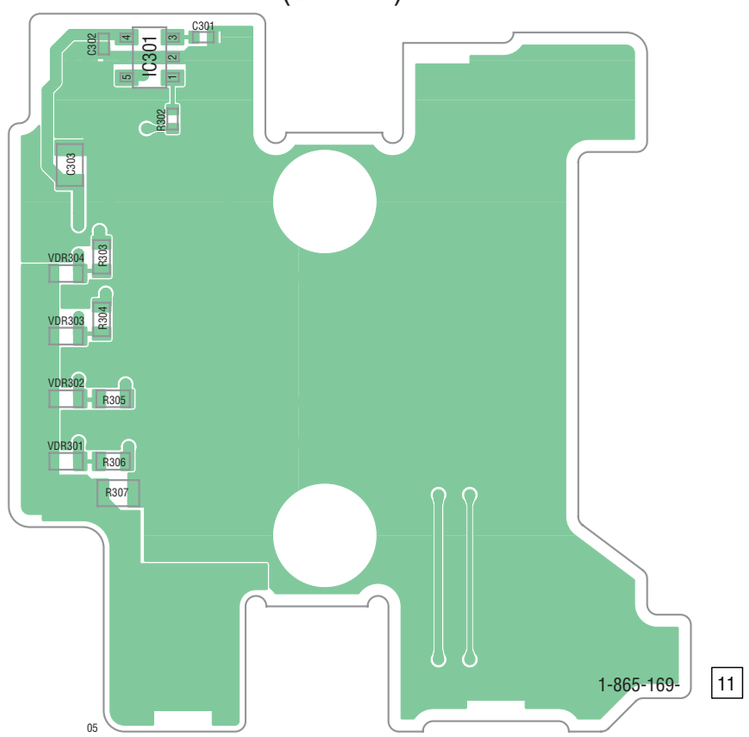
WW-001 (2 layers), UU-001 (2 layers), YY-001 (2 layers)

: Uses unleaded solder.

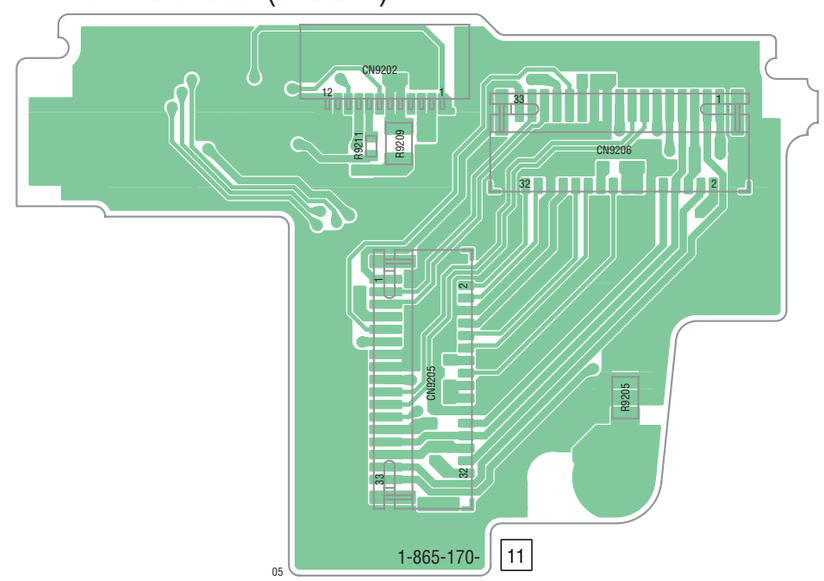
WW-001 BOARD (SIDE A)



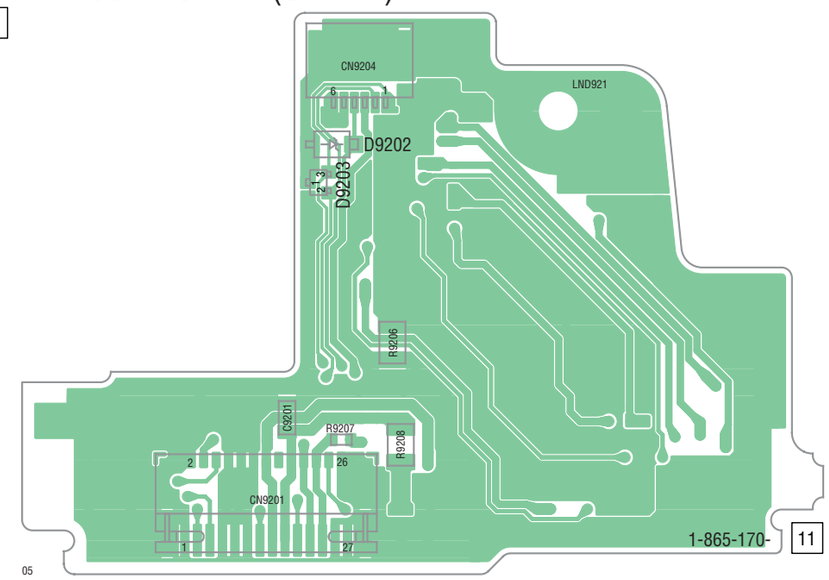
WW-001 BOARD (SIDE B)



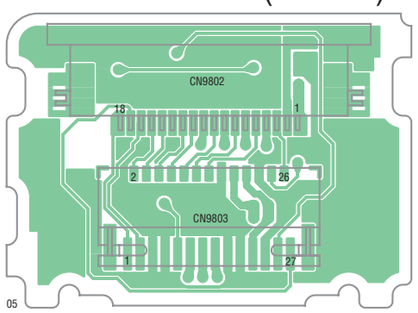
YY-001 BOARD (SIDE A)



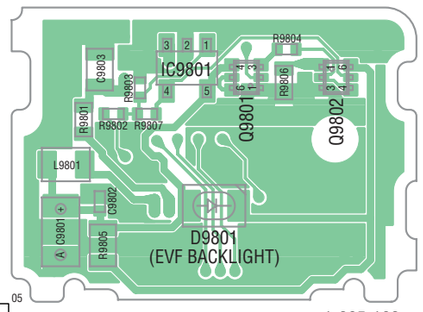
YY-001 BOARD (SIDE B)



UU-001 BOARD (SIDE A)

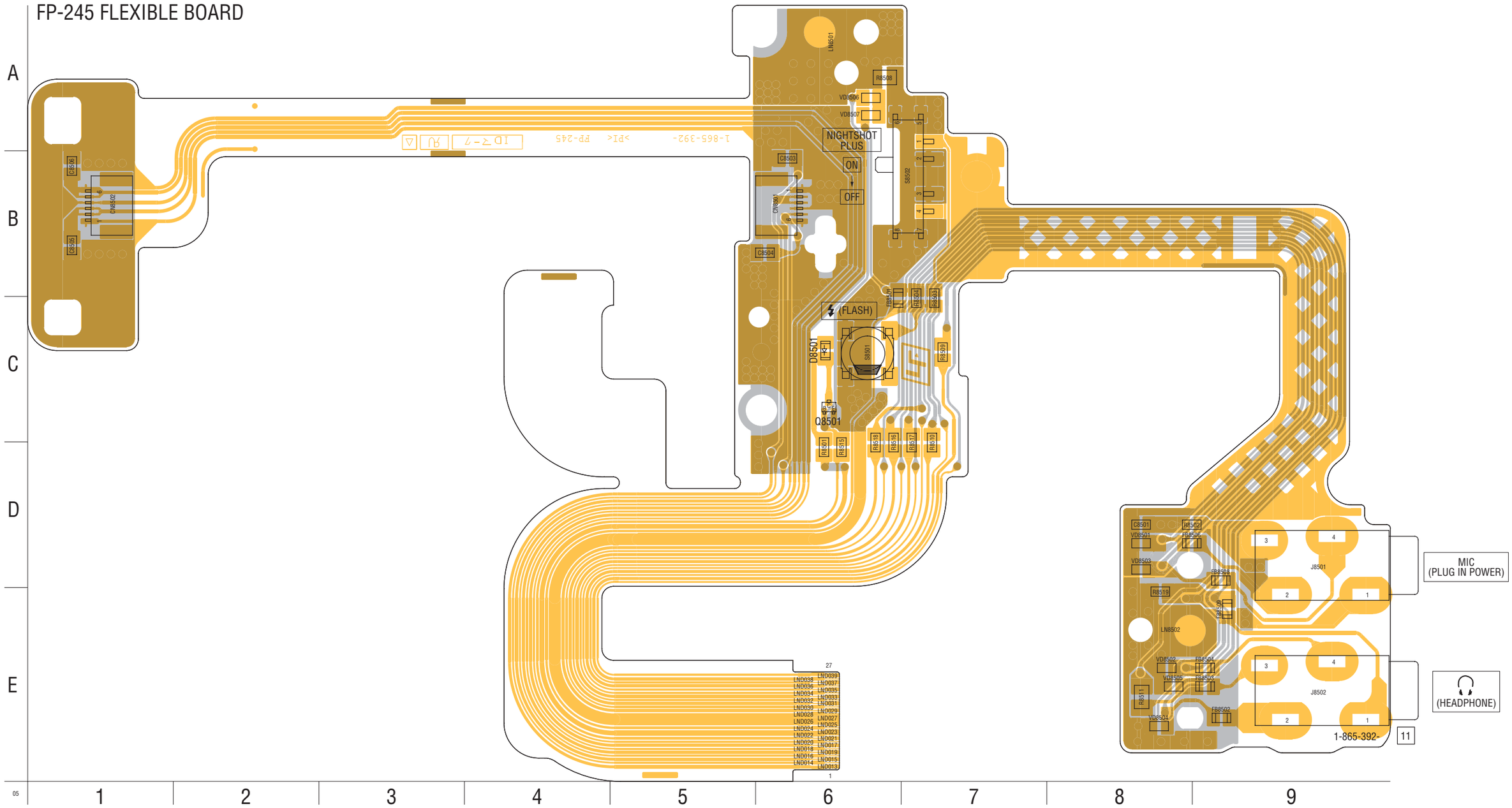


UU-001 BOARD (SIDE B)



FP-245 (2 layers)

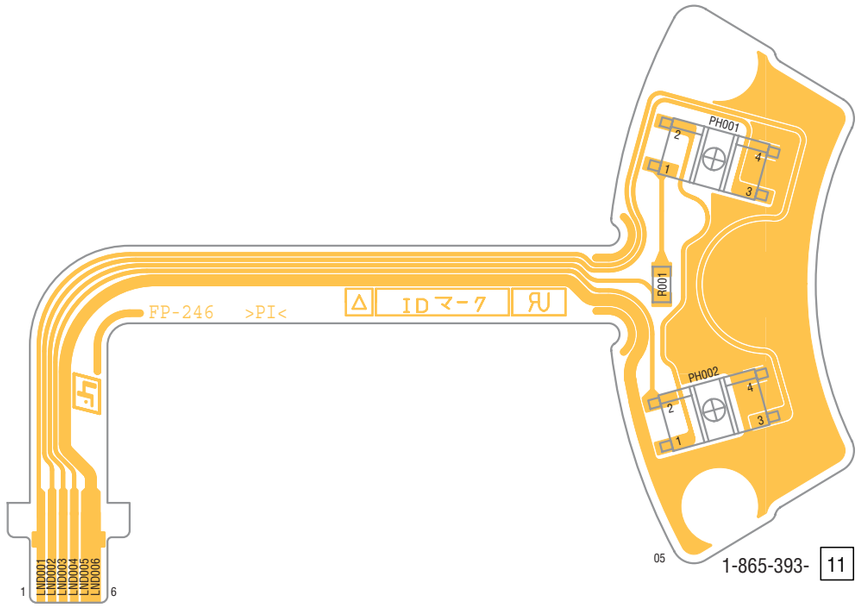
: Uses unleaded solder.



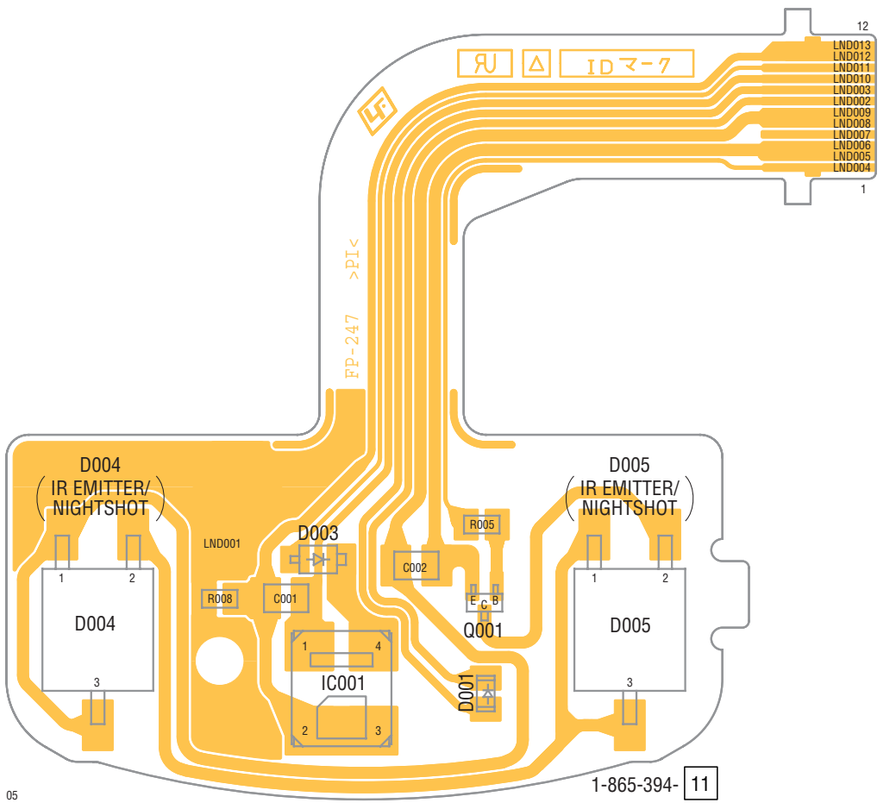
FP-246 (1 layer), FP-247 (1 layer), FP-249 (2 layers)

: Uses unleaded solder.

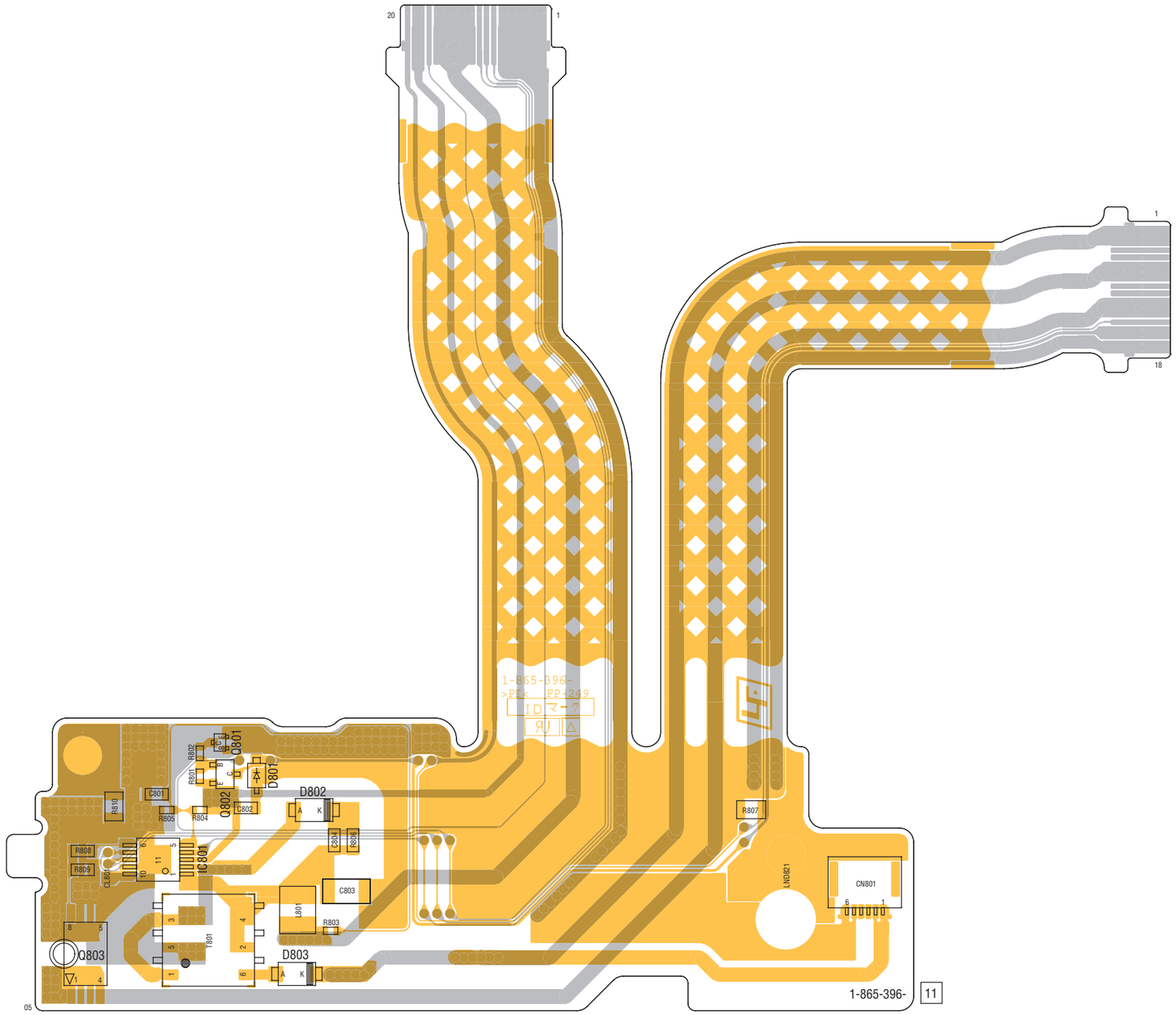
FP-246 FLEXIBLE BOARD



FP-247 FLEXIBLE BOARD



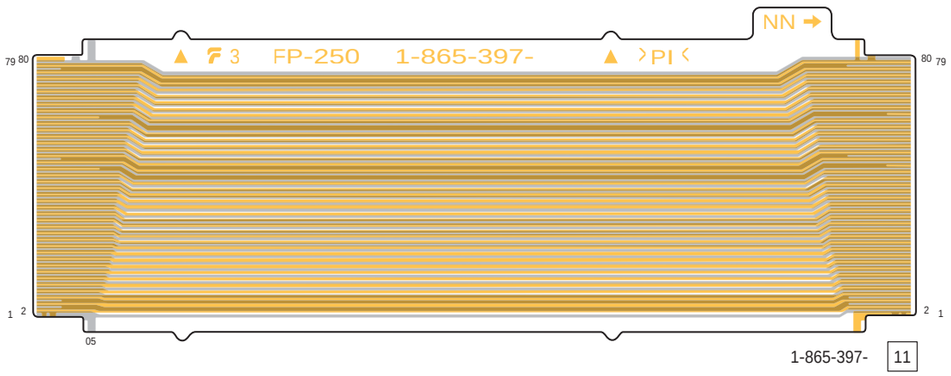
FP-249 FLEXIBLE BOARD



FP-250 (2 layers), FP-251 (2 layers), FP-252 (2 layers), FP-253 (1 layer)

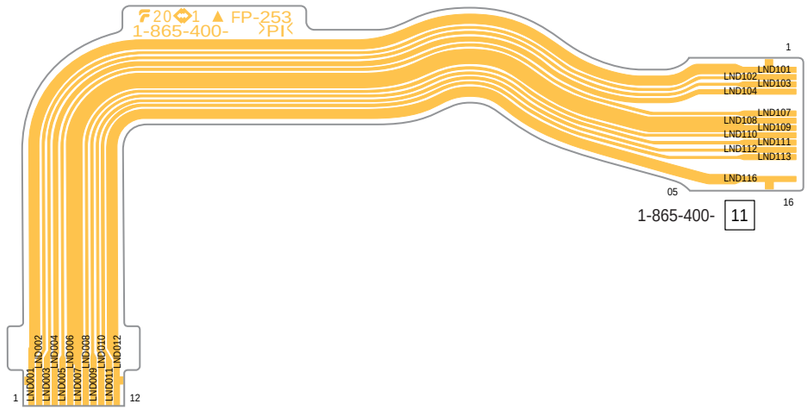
: Uses unleaded solder.

FP-250 FLEXIBLE BOARD



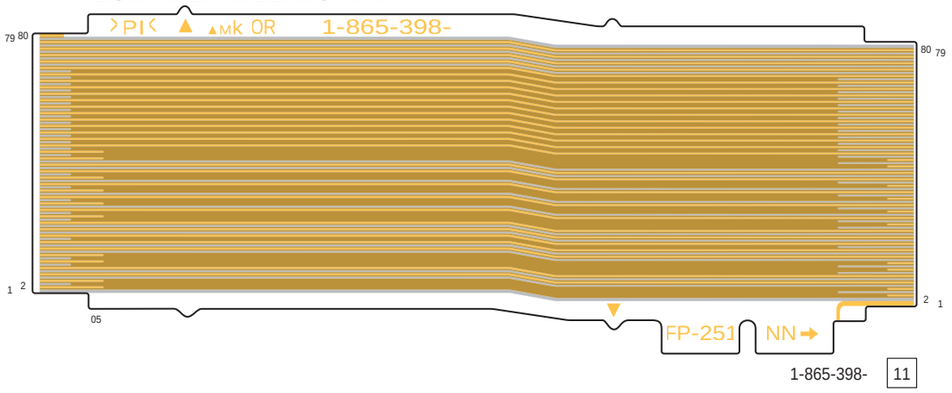
1-865-397- 11

FP-253 FLEXIBLE BOARD



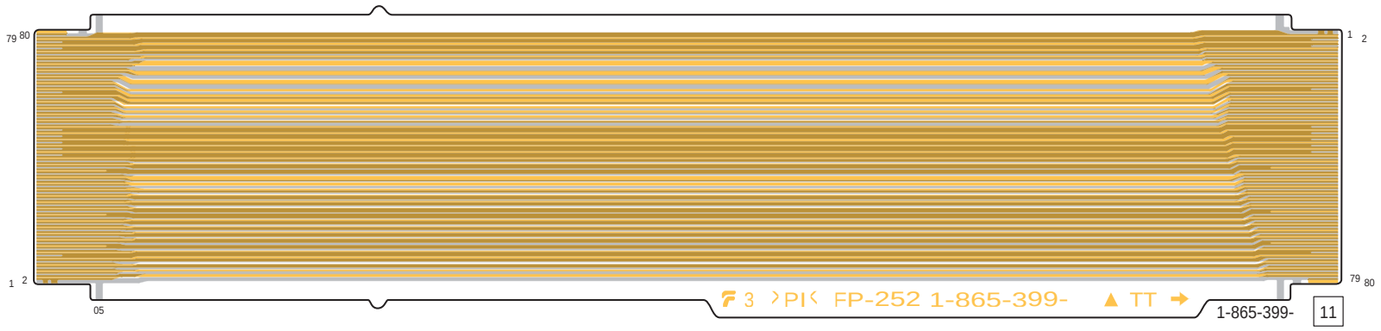
1-865-400- 11

FP-251 FLEXIBLE BOARD



1-865-398- 11

FP-252 FLEXIBLE BOARD

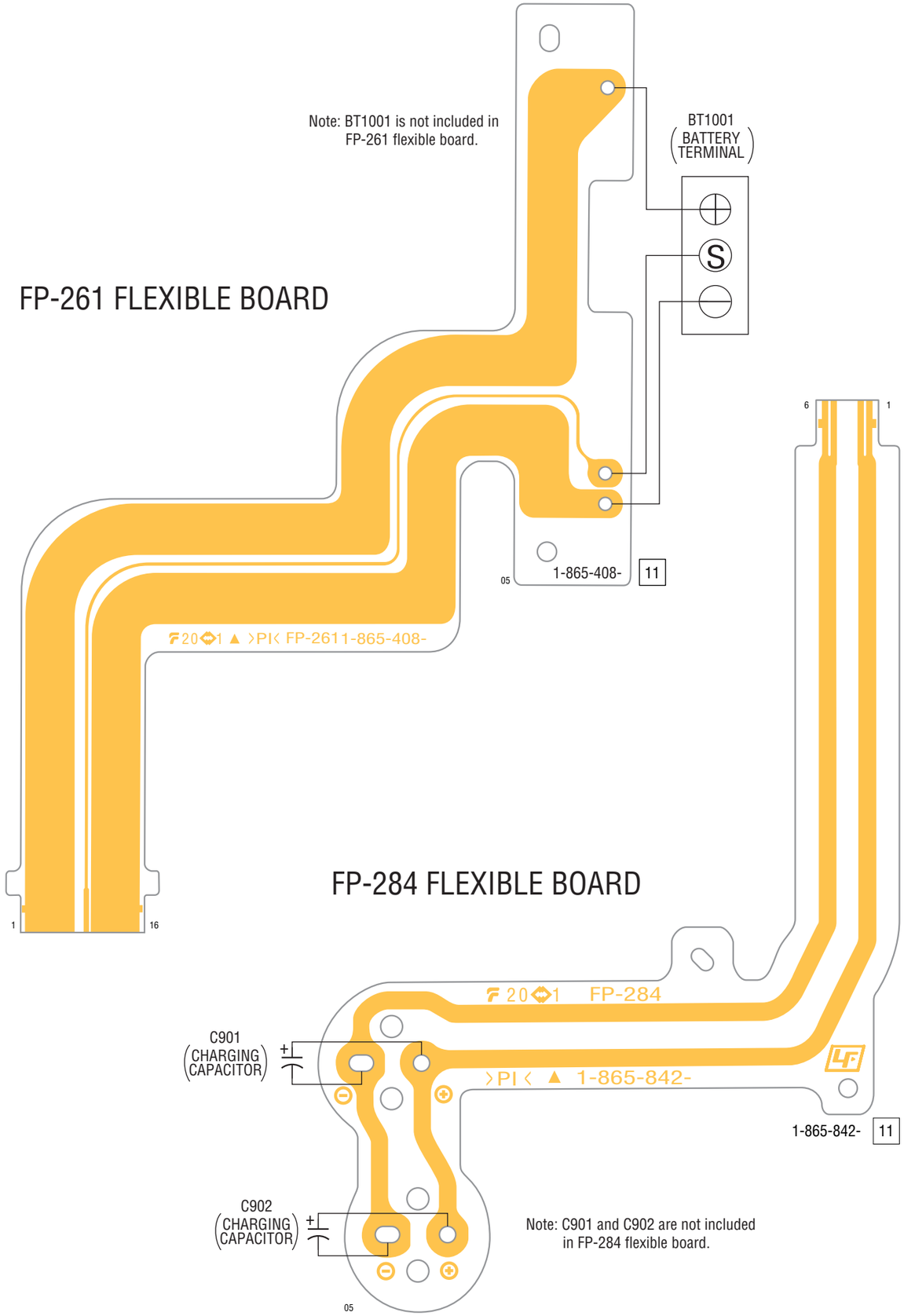


1-865-399- 11

FP-261 (1 layer), FP-262 (1 layer), FP-284 (1 layer), FL12300 (1 layer)

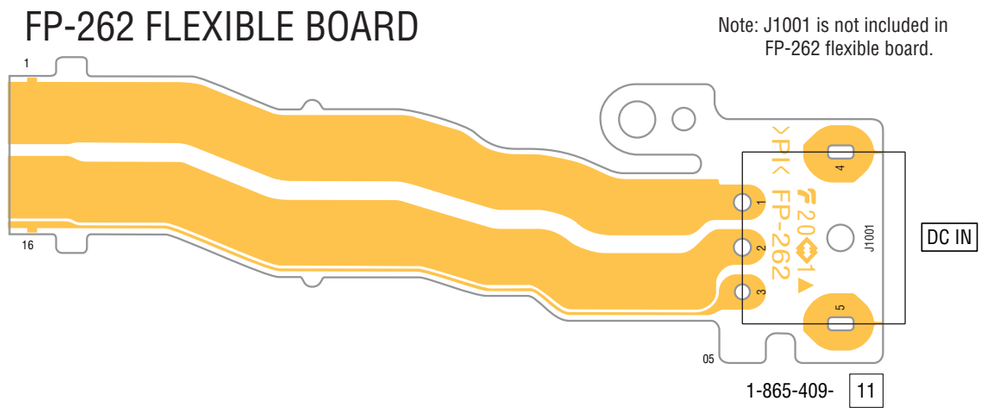
: Uses unleaded solder.

FP-261 FLEXIBLE BOARD



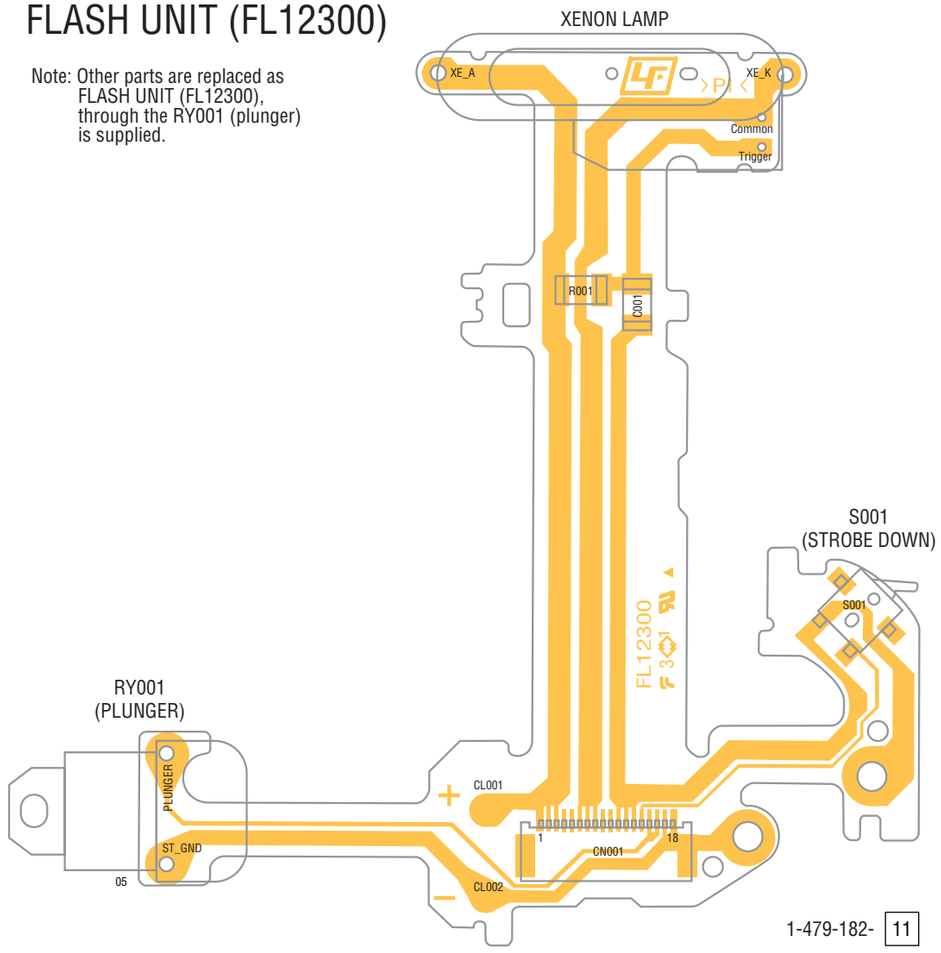
FP-284 FLEXIBLE BOARD

FP-262 FLEXIBLE BOARD



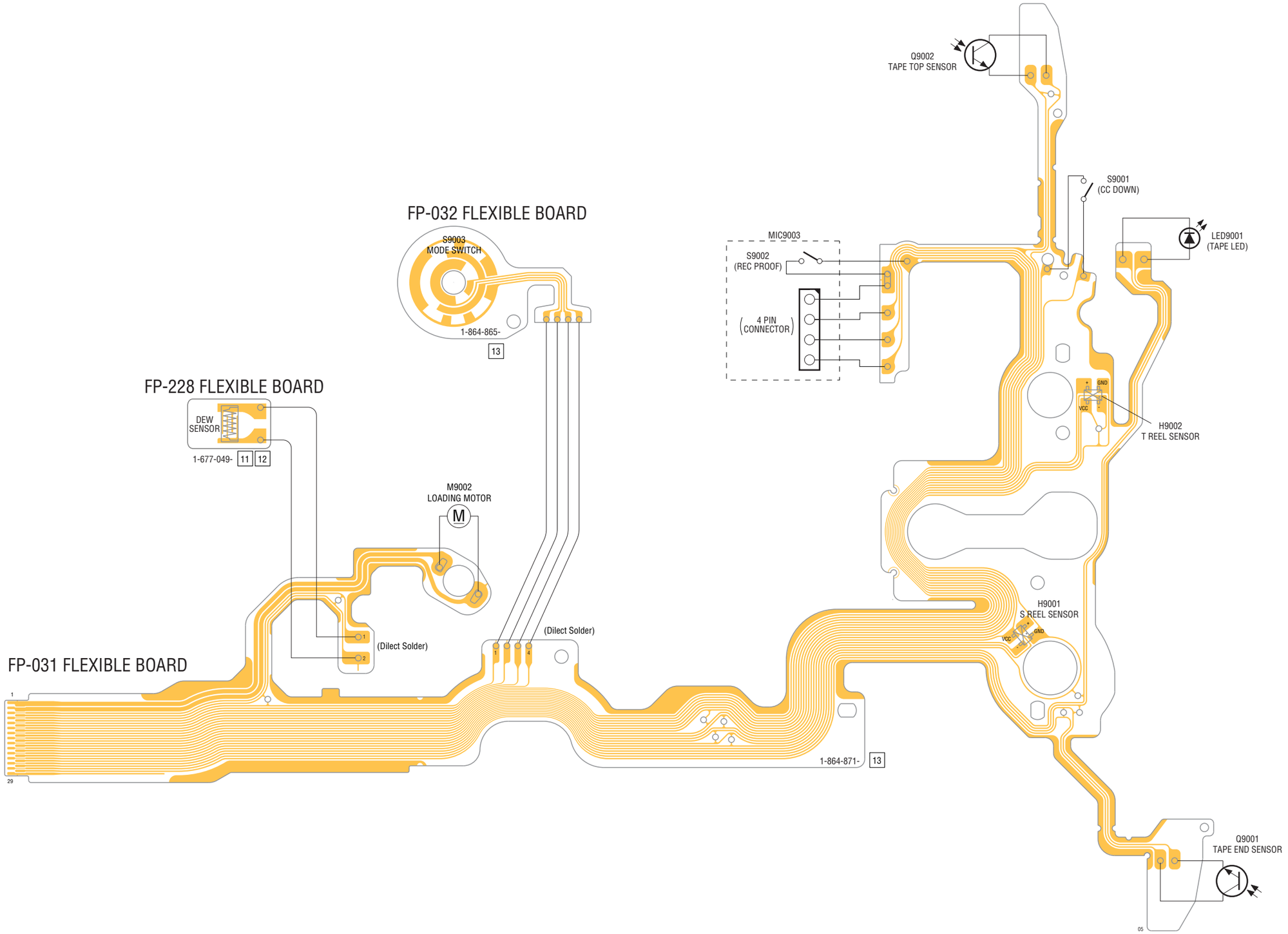
FLASH UNIT (FL12300)

Note: Other parts are replaced as FLASH UNIT (FL12300), through the RY001 (plunger) is supplied.



FP-031 (1 layer), FP-032 (1 layer), FP-228 (1 layer)

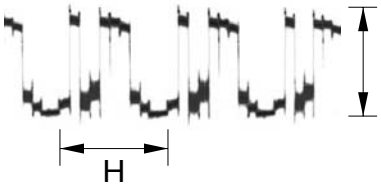
: Uses unleaded solder.



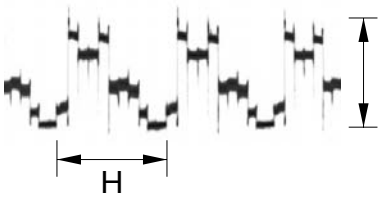
Waveforms of the EE-001, TT-001 and NN-001 boards are not shown.
Pages 4-117 to 4-125 are not shown.

4-4. WAVEFORMS

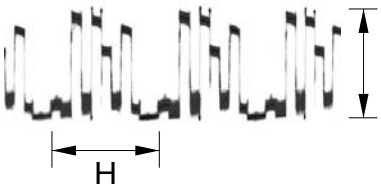
PP-001 BOARD

① 

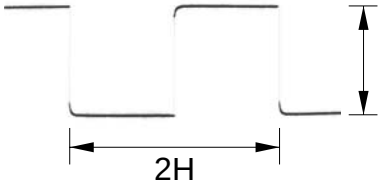
IC8701 ㊲ REC/PB

② 

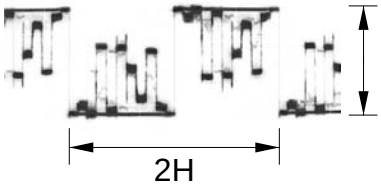
IC8701 ㊱ REC/PB

③ 

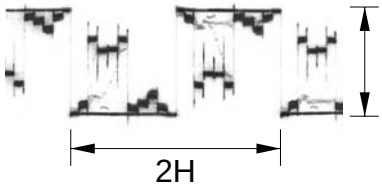
IC8701 ㉟ REC/PB

④ 

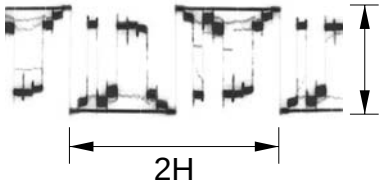
IC8701 ㉙ REC/PB

⑤ 

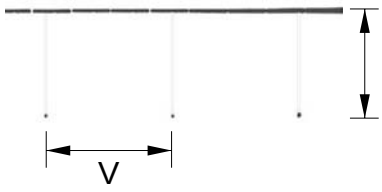
CL8704 (IC8701 ㉔ REC/PB)

⑥ 

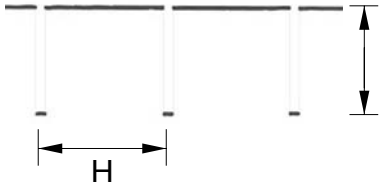
CL8705 (IC8701 ㉓ REC/PB)

⑦ 

CL8706 (IC8701 ㉒ REC/PB)

⑧ 

CL8702 (IC8701 ② REC/PB)

⑨ 

CL8701 (IC8701 ㊷ REC/PB)

Mounted parts location of the EE-001, TT-001, NN-001 and OO-001 boards are not shown.
Pages 4-127 to 4-130 are not shown.

4-5. MOUNTED PARTS LOCATION

no mark : side A
* mark : side B

PP-001 BOARD

C8701 A-2
C8702 A-2
C8703 C-3
C8704 C-3
C8706 B-3
C8708 B-3
C8709 B-3
C8710 A-5
C8711 B-2
C8712 B-3
C8714 B-3
C8715 B-3
C8716 B-2
C8717 B-2
C8719 C-3
C8720 C-3
C8721 B-2
C8722 A-2
C8724 A-3
C8725 A-3
C8727 B-3
C8728 A-3
C8729 A-4

CN8701 C-4
CN8702 B-2
CN8703 A-2
CN8704 A-3
CN8705 A-5

D8701 B-3
D8702 A-3

FB8701 B-3

IC8701 B-3

L8701 C-3
L8702 B-2
L8703 A-5
L8704 C-3

Q8701 A-2
Q8702 A-2
Q8706 C-5
Q8707 A-4
Q8708 C-5
Q8709 B-5
Q8710 C-3
Q8711 A-3
Q8712 C-3

R8701 C-2
R8703 C-2
R8704 A-5
R8705 A-4
R8706 A-5
R8708 B-3
R8709 A-4
R8710 B-3
R8711 B-3
R8712 B-3
R8714 B-3
R8715 A-5
R8716 A-4
R8717 A-5
R8718 A-4
R8719 B-3
R8720 B-3
R8721 A-5
R8722 C-5
R8723 B-3
R8724 B-5
R8725 C-5
R8727 A-3
R8728 B-3
R8729 B-3
R8730 B-5
R8731 B-5
R8732 A-4
R8735 C-3
R8736 A-3
R8737 C-3
R8739 A-3
R8740 C-2
R8741 B-2

RB8701 A-3

RR-001 BOARD

* BT9001 B-1

CN9001 C-2
CN9002 C-4
CN9003 A-4
CN9004 A-2
CN9005 A-3
CN9006 E-3
CN9007 A-1

D9001 D-4
* D9002 C-3
* D9003 C-4
* D9004 C-4
* D9005 B-4
* D9006 B-3
* D9007 A-3
* D9008 A-3
* D9009 A-4
* D9010 B-4
* D9011 B-4
D9012 D-3
* D9013 C-3
* D9014 D-4
* D9015 A-3
* D9016 A-3
* D9017 A-1

FB9001 E-3
FB9002 E-3
FB9003 D-3
FB9004 D-3
FB9005 D-3
FB9006 D-3

* LF9002 B-3

R9001 D-3
R9002 D-3
R9003 D-3
* R9004 C-3
* R9005 C-3
* R9006 C-3
* R9007 B-4
R9008 E-3
* R9009 A-3
* R9010 A-3
* R9011 A-3
R9012 D-2
* R9013 D-4
R9014 A-3
* R9015 A-1
R9016 C-2
* R9017 A-1
* R9018 A-1
* R9019 A-1
* R9020 A-1
* R9021 A-3

* S9001 D-4
* S9002 C-3
S9003 D-3

VDR901 D-3
VDR902 D-3
VDR903 D-3
VDR904 D-3
* VDR907 E-4

FP-245 FLEXIBLEBOARD

C8501 D-8

CN8501 B-6
CN8502 B-1

D8501 C-6

FB8501 C-6
FB8502 E-9
FB8503 E-9
FB8504 E-9
FB8506 D-8
FB8508 D-9
FB8509 E-9

J8501 D-9
J8502 E-9

Q8501 C-6

R8501 D-6
R8502 D-8
R8503 B-7
R8504 B-7
R8508 A-6
R8509 C-7
R8510 D-7
R8511 E-8
R8515 D-6
R8516 D-6
R8517 D-7
R8518 D-6
R8519 E-8

S8501 C-6
S8502 B-7

VD8501 D-8
VD8502 F-8
VD8503 D-8
VD8504 E-8
VD8505 E-8
VD8506 A-6
VD8507 A-6

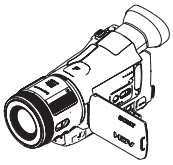
NOTE

5. REPAIR PARTS LIST (1/2)

TO (2/2)

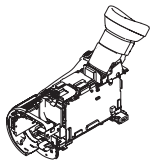
NOTE: Characters A to Z of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link EXPLODED VIEWS



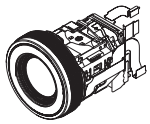
A

OVERALL ASSEMBLY



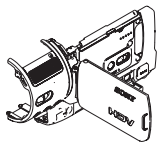
B

MD FRAME BLOCK



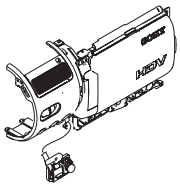
C

LENS BLOCK ASSEMBLY



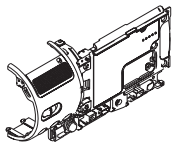
D

CABINET (R) BLOCK-1



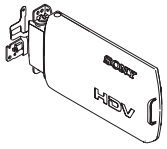
E

CABINET (R) BLOCK-2



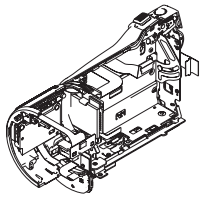
F

CABINET (R) BLOCK ASSEMBLY (E)



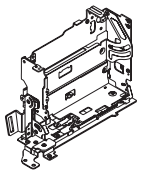
G

LCD BLOCK ASSEMBLY



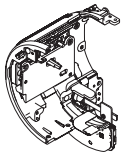
H

CABINET (G) BLOCK



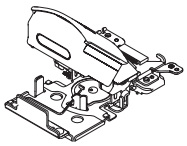
I

CF FRAME BLOCK



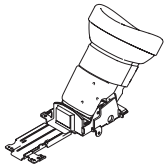
J

LENS CABINET (L) ASSEMBLY



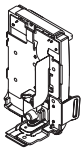
K

STROBO SCOPE BLOCK ASSEMBLY



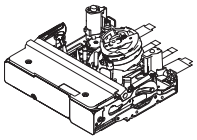
L

EVF BLOCK ASSEMBLY



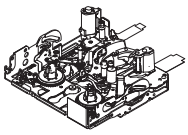
M

BATTERY PANEL BLOCK ASSEMBLY



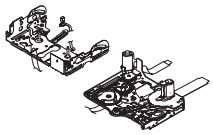
N

MECHANISM DECK SECTION



O

LS/MECHANICHAL CHASSIS BLOCK ASSEMBLY-1



P

LS/MECHANICHAL CHASSIS BLOCK ASSEMBLY-2

NOTE

5. REPAIR PARTS LIST (2/2)

TO (1/2)

NOTE: Characters A to Z of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link

ELECTRICAL PARTS LIST

ACCESSORIES

FP-031 FLEXIBLE BOARD P	FP-249 FLEXIBLE BOARD I	II-001 BOARD F
FP-032 FLEXIBLE BOARD P	FP-261 FLEXIBLE BOARD M	PP-001 BOARD G
FP-228 FLEXIBLE BOARD P	FP-262 FLEXIBLE BOARD B	RR-001 BOARD F
FP-245 FLEXIBLE BOARD J	FP-263 FLEXIBLE BOARD I	UU-001 BOARD L
FP-246 FLEXIBLE BOARD C	FP-284 FLEXIBLE BOARD I	WW-001 BOARD H
FP-247 FLEXIBLE BOARD J	HH-001 BOARD F	YY-001 BOARD C
FP-248 FLEXIBLE BOARD G		

5. REPAIR PARTS LIST

(ENGLISH)

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(JAPANESE)

【使用上の注意】

- ここに記載されている部品は，補修用部品であるため，回路図及びセットに付いている部品と異なる場合があります。
- −XX, −Xは標準化部品のため，セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でuFはµFを示します。
- 抵抗の単位Ωは省略してあります。
  金　　被：金属被膜抵抗。
  サンキン：酸化金属被膜抵抗。
- インダクタの単位でuHはµHを示します。
- 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれµA..., µPA..., µPB..., µPC..., µPD...を示します。

お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

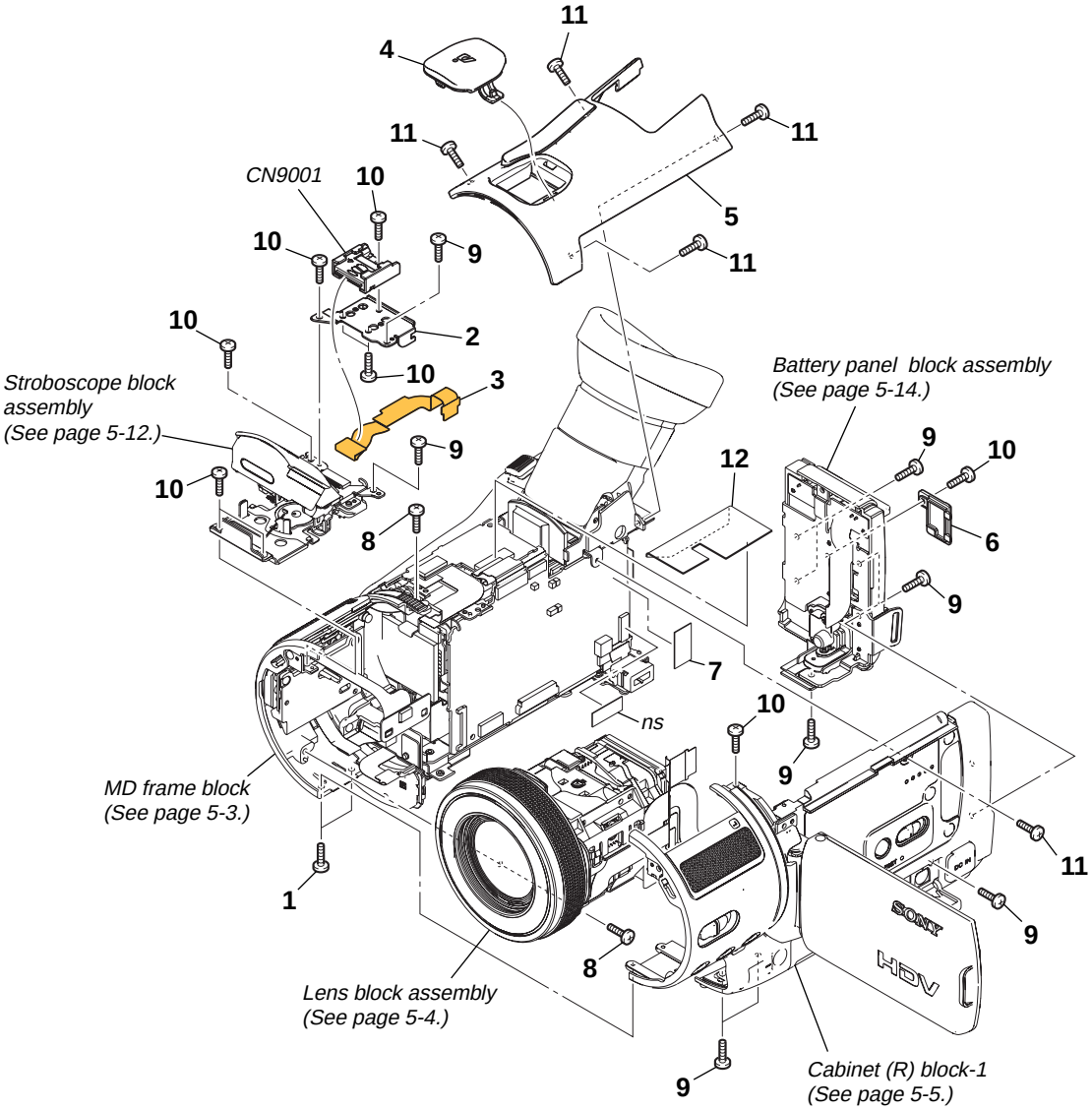
⚠印の部品，または⚠印付の点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用してください。

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  BR : Brazilian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  HK : Hong Kong model
  J : Japanese model
  JE : Tourist model
  KR : Korea model
  NE : North European model

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL ASSEMBLY

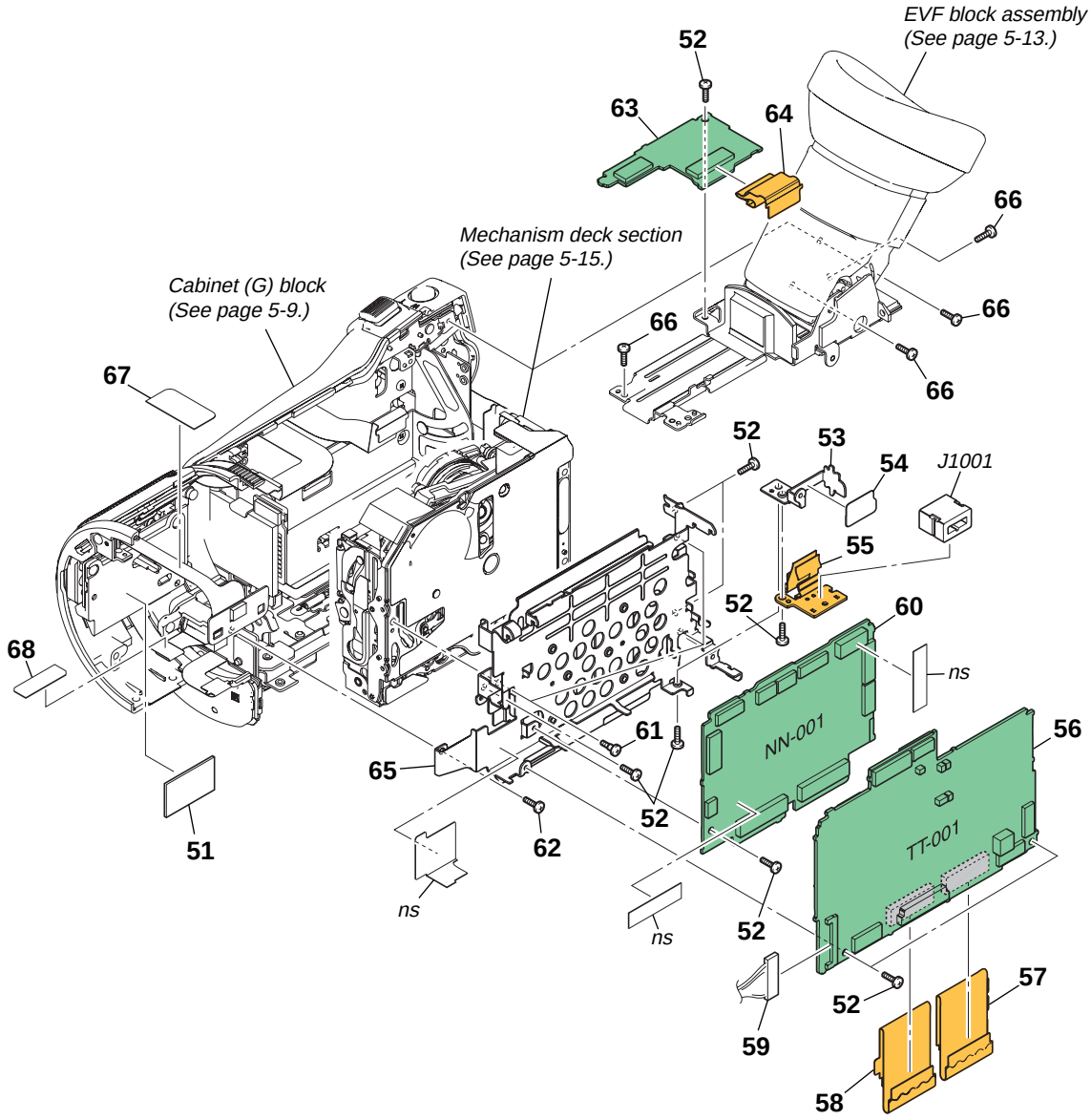


Ref. No.	Part No.	Description
1	2-635-562-11	SCREW (M1.7) (for BLACK)
1	3-989-735-01	SCREW (M1.7), LOCK ACE, P2 (for SILVER)
2	2-633-526-01	FRAME, SHOE
3	1-865-400-11	FP-253 FLEXIBLE BOARD
4	2-633-525-01	COVER, SHOE (BLACK)
4	2-633-525-11	COVER, SHOE (SILVER)
5	X-2059-610-1	CABINET (UPPER) ASSY (BLACK)
5	X-2059-614-1	CABINET (UPPER) ASSY (SILVER)
6	2-633-531-01	LID, CPC

Ref. No.	Part No.	Description
7	2-633-544-01	SHEET (DD)
8	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
9	2-635-562-31	SCREW (M1.7)
10	2-635-562-11	SCREW (M1.7)
11	2-635-562-31	SCREW (M1.7) (for BLACK)
11	2-599-475-31	SCREW (M1.7) (for SILVER)
12	2-636-395-01	SHEET (HS)
CN9001	1-818-890-11	CONNECTOR, EXTERNAL (HOT SHOE)

5-1-2. MD FRAME BLOCK

ns: not supplied

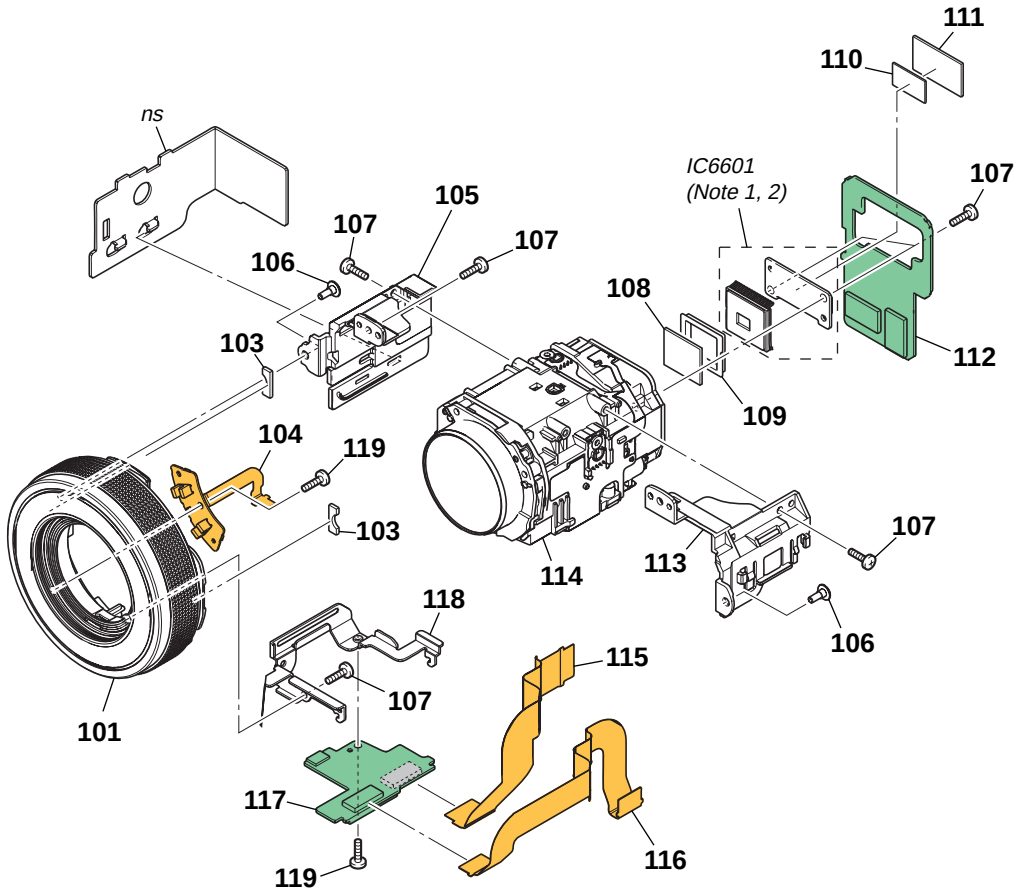


- Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description
51	2-633-539-01	SHEET (EEL), RADIATION
52	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
53	2-633-536-01	RETAINER, DC
54	2-633-538-01	SHEET (DC)
55	1-865-409-11	FP-262 FLEXIBLE BOARD
56	A-1126-267-A	TT-001BOARD, COMPLETE (SERVICE) (HC1/HC1K)
56	A-1126-268-A	TT-001BOARD, COMPLETE (SERVICE) (HC1E/HC1EK)
57	1-865-398-11	FP-251 FLEXIBLE BOARD
58	1-865-397-11	FP-250 FLEXIBLE BOARD
59	1-963-577-11	HARNESS (COAXIAL CABLE)
60	A-1110-895-A	NN-001 BOARD, COMPLETE
61	3-062-214-01	SCREW (M1.4X1.5)
62	2-635-562-31	SCREW (M1.7)
63	A-1110-897-A	OO-001 BOARD, COMPLETE
64	1-865-401-11	FP-254 FLEXIBLE BOARD
65	X-2059-604-1	FRAME ASSY, MD
66	2-635-562-11	SCREW (M1.7)
67	2-633-530-01	SHEET, LENS PROTECTION
68	2-633-545-01	SHEET (249)
⚠J1001	1-817-361-11	DC-IN CONNECTOR (DC IN)

5-1-3. LENS BLOCK ASSEMBLY

ns: not supplied



Note 1: IC6601 は，マウント済EE−001基板には含まれません。

Note 2: イメージャの交換時は4−6ページの“イメージャ交換時の注意”を必ずお読みください。

Note 1: IC6601 is not included in EE-001 complete board.

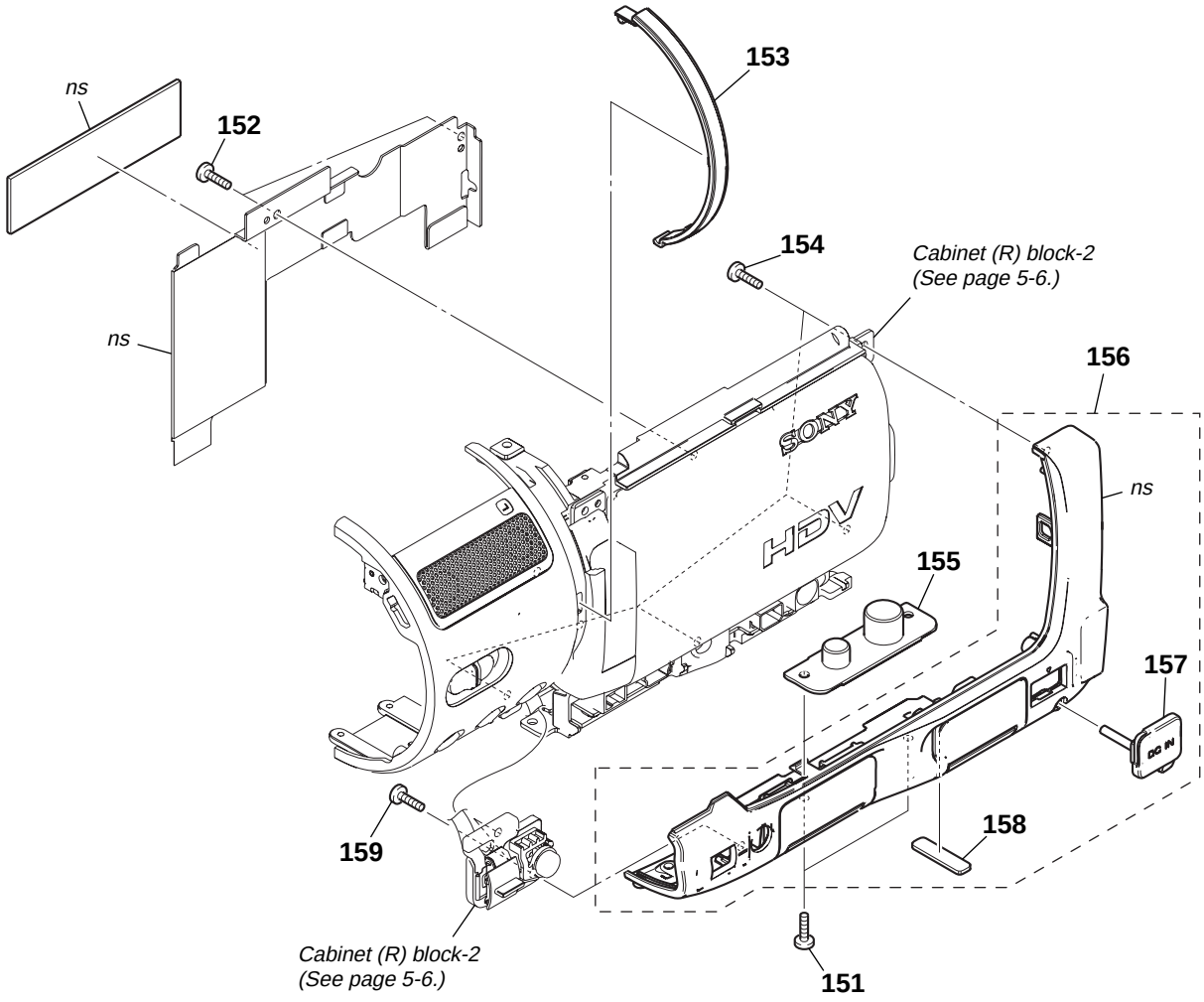
Note 2: Be sure to read “Precuations for Replacement of Imager” on page 4-5 when changing the imager.

Ref. No.	Part No.	Description
101	X-2059-601-1	CABINET ASSY, MF
103	2-633-556-01	SHEET (MF), VIBRATION PROOF
104	A-1110-905-A	FP-246 BOARD, COMPLETE
105	2-633-552-01	FRAME (L), LENS
106	3-069-937-11	TAPPING (B1.7X3.5), HEAD
107	3-080-204-21	SCREW, TAPPING, P2
108	1-788-292-11	FILTER BLOCK, OPTICAL
109	2-629-086-01	RUBBER (871), SEAL
110	2-633-557-01	SHEET (EE), RADIATION
111	2-634-204-01	SHEET (EEM), RADIATION

Ref. No.	Part No.	Description
112	A-1110-896-A	EE-001 BOARD, COMPLETE
113	2-633-554-01	FRAME (R), LENS
114	8-848-793-01	DEVICE, LENS LSV-871A
115	1-865-411-11	FP-264 FLEXIBLE BOARD
116	1-865-403-11	FP-256 FLEXIBLE BOARD
117	A-1110-903-A	YY-001 BOARD, COMPLETE
118	2-633-555-01	FRAME, YY
119	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
IC6601	A-1092-569-A	CMOS BLOCK ASSY (CMOS IMAGER) (Note 1, 2)

5-1-4. CABINET (R) BLOCK-1

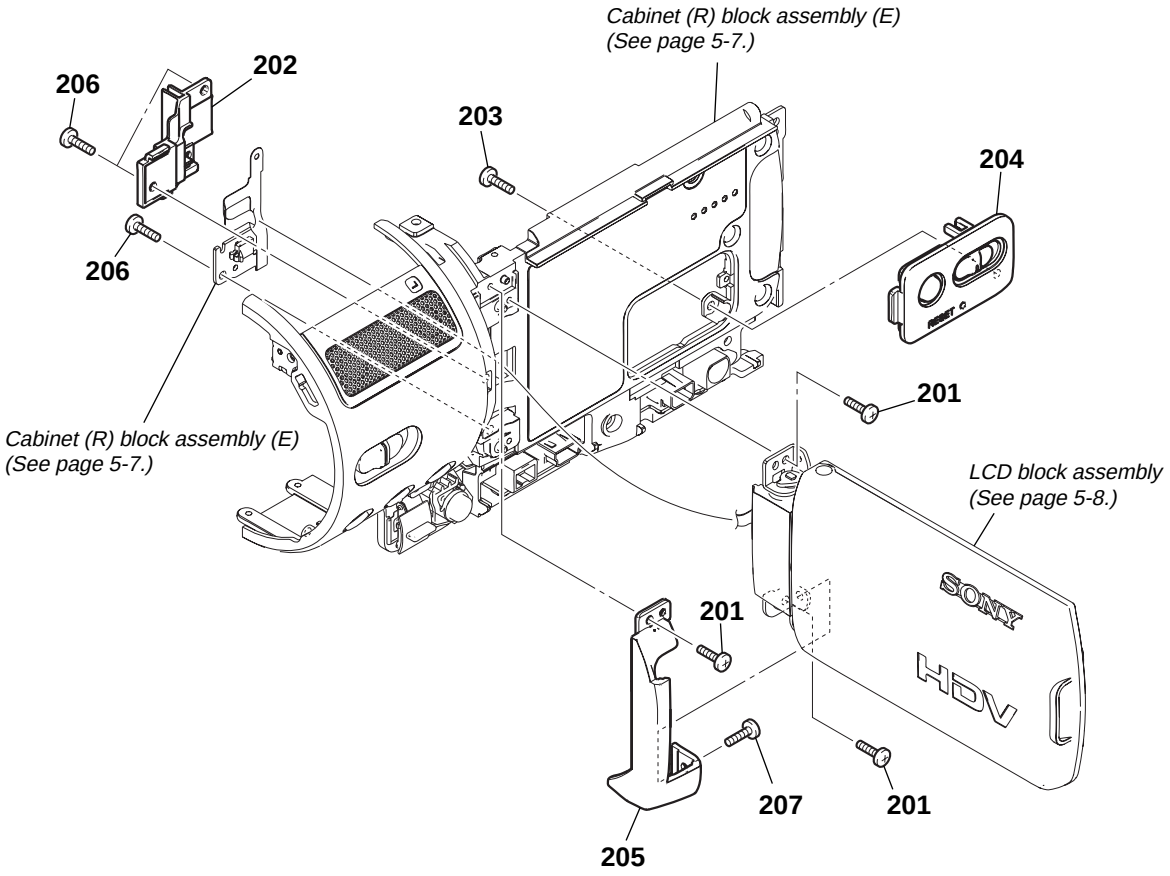
ns: not supplied



Ref. No.	Part No.	Description
151	2-635-562-31	SCREW (M1.7)
152	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
153	2-633-627-01	RING (R), ORNAMENTAL
154	3-078-890-01	SCREW, TAPPING
155	2-633-630-01	SCREW, TRIPOD

Ref. No.	Part No.	Description
156	X-2059-62501	CABINET (R) ASSY, JACK (J)
156	X-2059-63401	CABINET (R) ASSY, JACK (EXCEPT J)
157	2-633-621-01	COVER, DC JACK
158	2-633-620-01	FOOT, RUBBER

5-1-5. CABINET (R) BLOCK-2

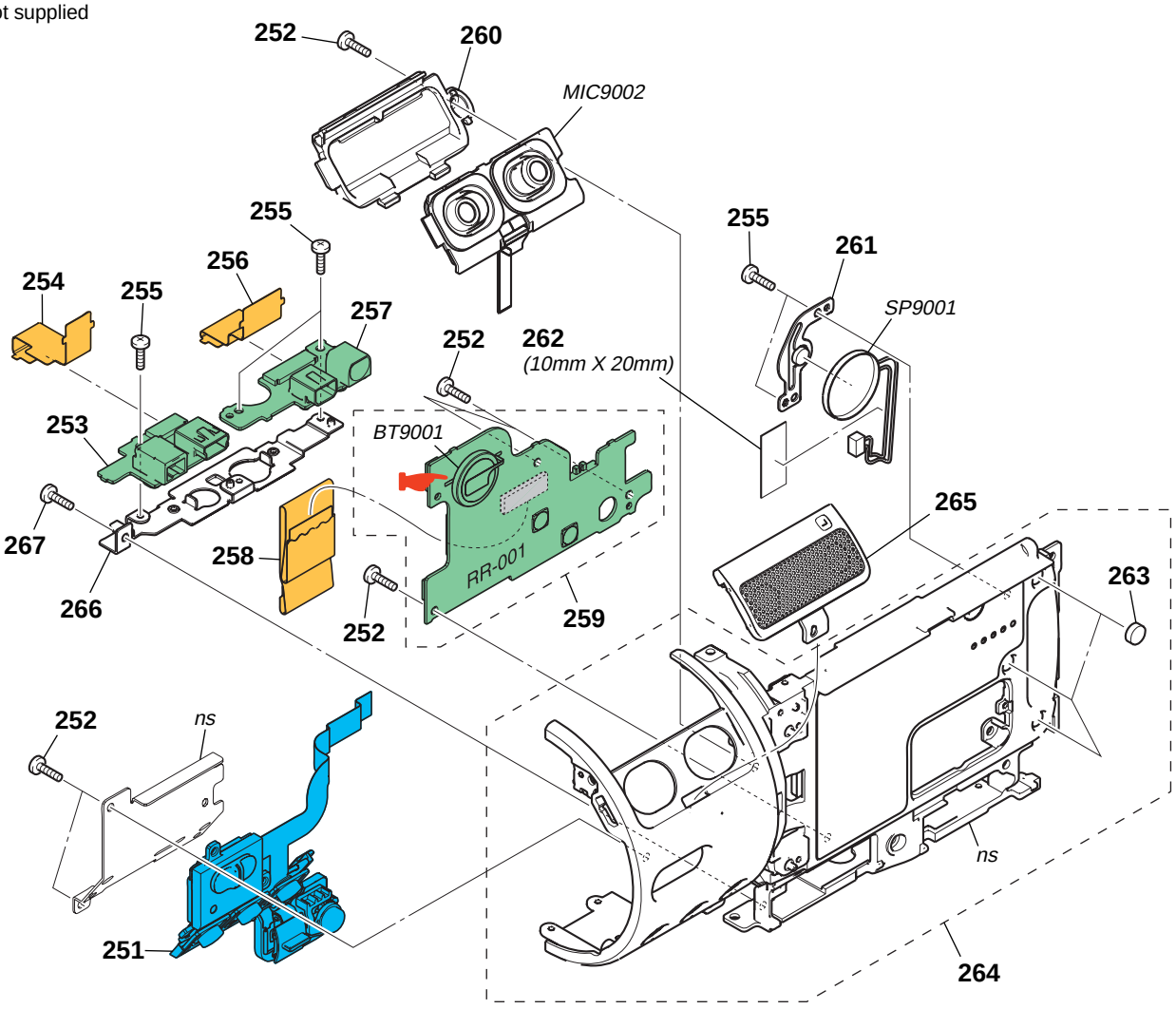


Ref. No.	Part No.	Description
201	2-635-562-31	SCREW (M1.7)
202	2-633-631-01	GUARD (R), HINGE FLEXIBLE
203	3-078-890-01	SCREW, TAPPING
204	X-2059-630-1	BUTTON ASSY, R (BLACK) (J)
204	X-2059-633-1	BUTTON ASSY, R (BLACK) (EXCEPT J)
204	X-2059-638-1	BUTTON ASSY, R (SILVER)

Ref. No.	Part No.	Description
205	2-633-646-01	COVER (R), HINGE (BLACK)
205	2-633-646-11	COVER (R), HINGE (SILVER)
206	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
207	2-635-562-31	SCREW (M1.7) (for BLACK)
207	2-599-475-31	SCREW (M1.7) (for SILVER)

5-1-6. CABINET (R) BLOCK ASSEMBLY (E)

ns: not supplied



BT9001(BATTERY, LITHIUM SECONDARY)
Board on the mount position (See page 4-103).

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

CAUTION 1:
262番のテープ(F)(3−070−529−01)は，T0.25ヒメロン(3−076−631−01)を切って使用。

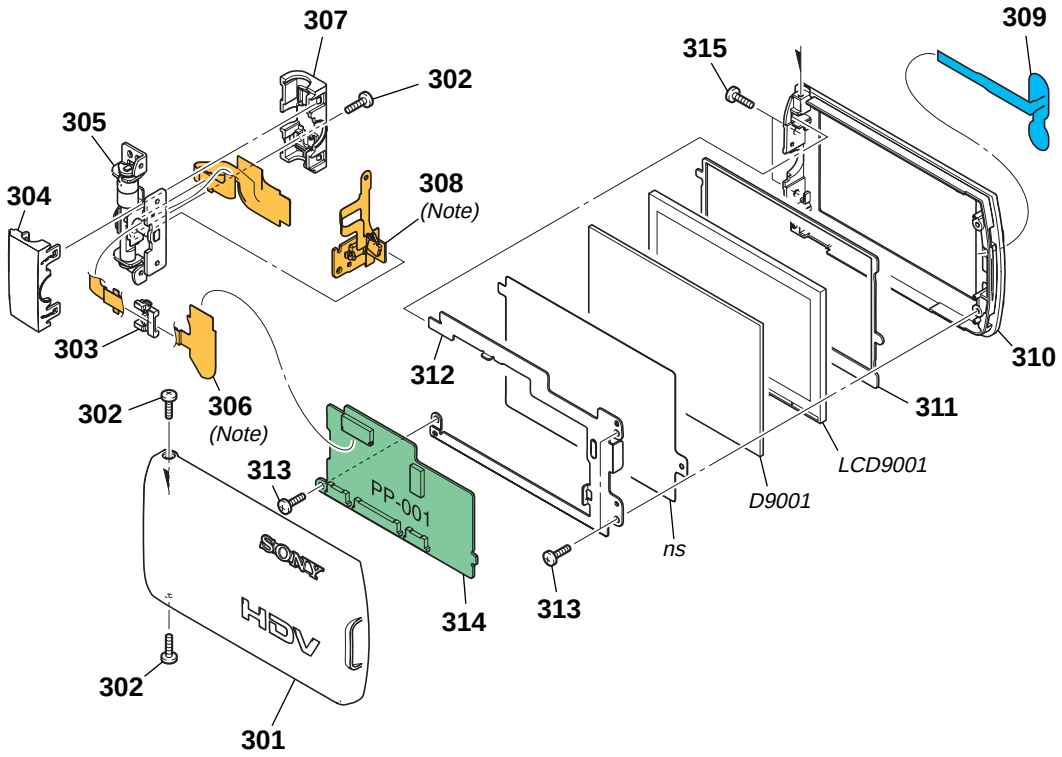
CAUTION 1 :
For the part of 262 : TAPE (F) (3-070-529-01), cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

- Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description
251	1-479-180-11	SWITCH BLOCK, CONTROL (CK12300)
252	2-635-562-11	SCREW (M1.7)
253	A-1110-898-A	II-001 BOARD, COMPLETE
254	1-865-404-11	FP-257 FLEXIBLE BOARD
255	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
256	1-865-405-11	FP-258 FLEXIBLE BOARD
257	A-1115-409-A	HH-001 BOARD, COMPLETE
258	1-865-399-11	FP-252 FLEXIBLE BOARD
259	A-1110-900-A	RR-001 BOARD, COMPLETE
260	X-2059-716-1	CASE (R) ASSY, MICROPHONE
261	X-2059-628-1	RETAINER ASSY, SPEAKER
262	CAUTION 1	TAPE (F)
263	2-633-604-01	CUSHION, CABINET (R)
264	X-2059-624-1	CABINET (R) ASSY (BLACK) (J)
264	X-2059-632-1	CABINET (R) ASSY (BLACK) (EXCEPT J)
264	X-2059-637-1	CABINET (R) ASSY (SILVER)
265	X-2059-626-1	BASE (L) ASSY, MICROPHONE
266	2-633-628-01	HOLDER, PC BOARD
267	2-635-562-31	SCREW (M1.7)
⚠BT9001	1-756-128-11	BATTERY, LITHIUM (SECONDARY)
MIC9002	1-542-628-11	MICROPHONE UNIT
SP9001	1-825-260-21	LOUD SPEAKER (1.6CM)

5-1-7. LCD BLOCK ASSEMBLY

ns: not supplied



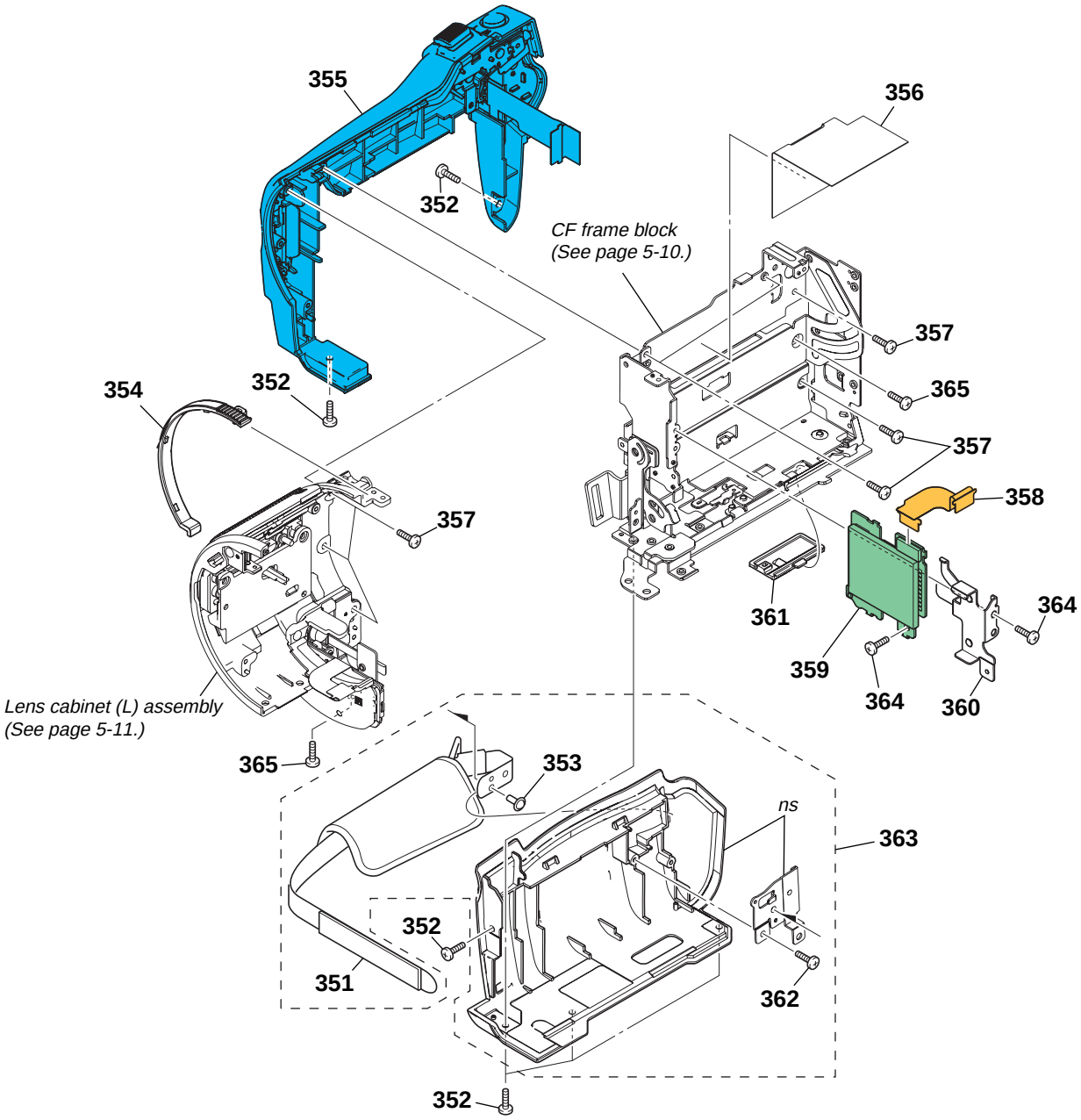
Note: Be sure to read “2-2. The Method of Attachment FP-248, FP-259 Flexible Board” on page 2-7, 8.

Note: 2-7, 8ページの“2-2. FP-248, FP-259フレキシブル基板の取り付け方”を必ずお読み下さい。

Ref. No.	Part No.	Description
301	X-2059-639-1	CABINET (C) ASSY, P (BLACK) (HC1: J)
301	X-2059-642-1	CABINET (C) ASSY, P (BLACK) (HC1E/HC1EK)
301	X-2059-643-1	CABINET (C) ASSY, P (BLACK) (HC1: US, CND, KR, E/HC1K)
301	X-2059-645-1	CABINET (C) ASSY, P (SILVER)
302	2-635-562-11	SCREW (M1.7) (for BLACK)
302	3-989-735-01	SCREW (M1.7), LOCK ACE, P2 (for SILVER)
303	2-633-643-01	CLAMP, FLEXIBLE
304	2-633-644-01	COVER (FRONT), HINGE (BLACK)
304	2-633-644-11	COVER (FRONT), HINGE (SILVER)
305	X-2059-62001	HINGE ASSY
306	1-865-406-11	FP-259 FLEXIBLE BOARD
307	2-633-645-01	COVER (REAR), HINGE (BLACK)
307	2-633-645-11	COVER (REAR), HINGE (SILVER)
308	1-865-395-21	FP-248 FLEXIBLE BOARD
309	1-479-063-21	KEY BLOCK, CONTROL (SB9000)
310	2-633-639-01	CABINET (M), P (BLACK) (J)
310	2-633-639-11	CABINET (M), P (SILVER)
310	2-633-639-21	CABINET (M), P (BLACK) (EXCEPT J)
311	2-633-640-01	CUSHION, PANEL
312	2-633-642-01	FRAME, PANEL
313	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
314	A-1110-899-A	PP-001 BOARD, COMPLETE
315	2-635-562-11	SCREW (M1.7)
D9001	1-478-929-11	BLOCK, LIGHT GUIDE PLATE (2.7)
LCD9001	A-1083-763-A	TP BLOCK ASSY 27STGU

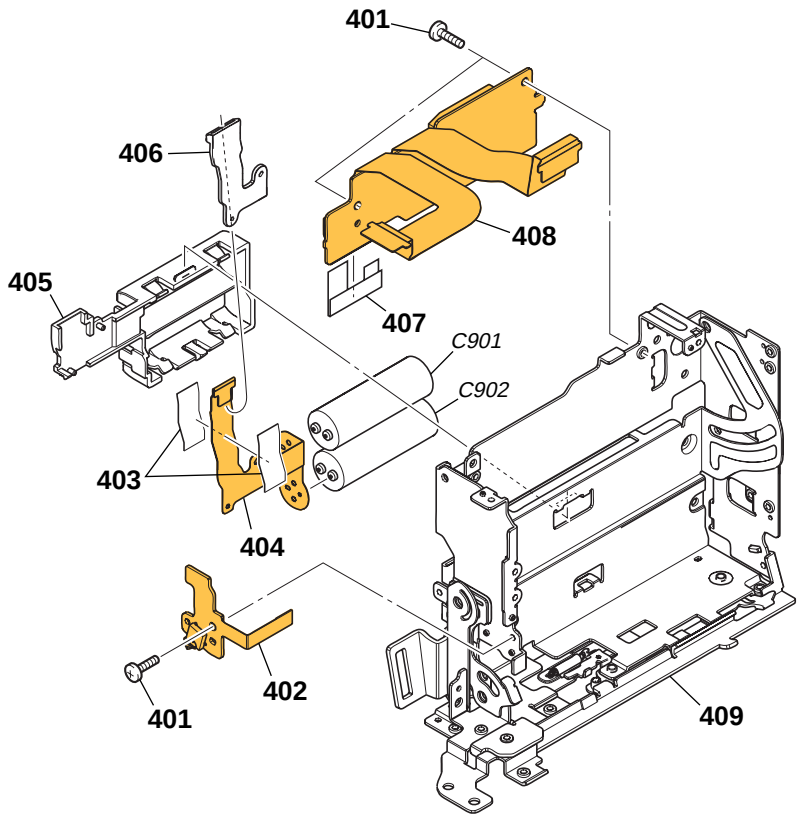
5-1-8. CABINET (G) BLOCK

ns: not supplied



Ref. No.	Part No.	Description
351	2-055-815-01	BELT, GRIP
352	2-635-562-11	SCREW (M1.7)
353	3-082-266-01	PAN-HEAD SCREW WITH SEAT (M2)
354	2-633-529-01	RING (L), ORNAMENTAL
355	1-479-101-11	SWITCH BLOCK, CONTROL (PS12300) (J)
355	1-479-101-21	SWITCH BLOCK, CONTROL (PS12300) (EXCEPT J)
356	2-633-542-01	SHEET (CS)
357	3-078-890-01	SCREW, TAPPING
358	1-865-402-11	FP-255 FLEXIBLE BOARD
359	A-1110-902-A	WW-001 BOARD, COMPLETE
360	2-633-533-01	PLATE, MS PC BOARD FIXED
361	3-080-471-11	KNOB, EJECT
362	3-080-204-01	SCREW, TAPPING, P2
363	X-2059-605-1	CABINET (G) ASSY (J)
363	X-2059-612-1	CABINET (G) ASSY (EXCEPT J)
364	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
365	2-635-562-31	SCREW (M1.7)

5-1-9. CF FRAME BLOCK

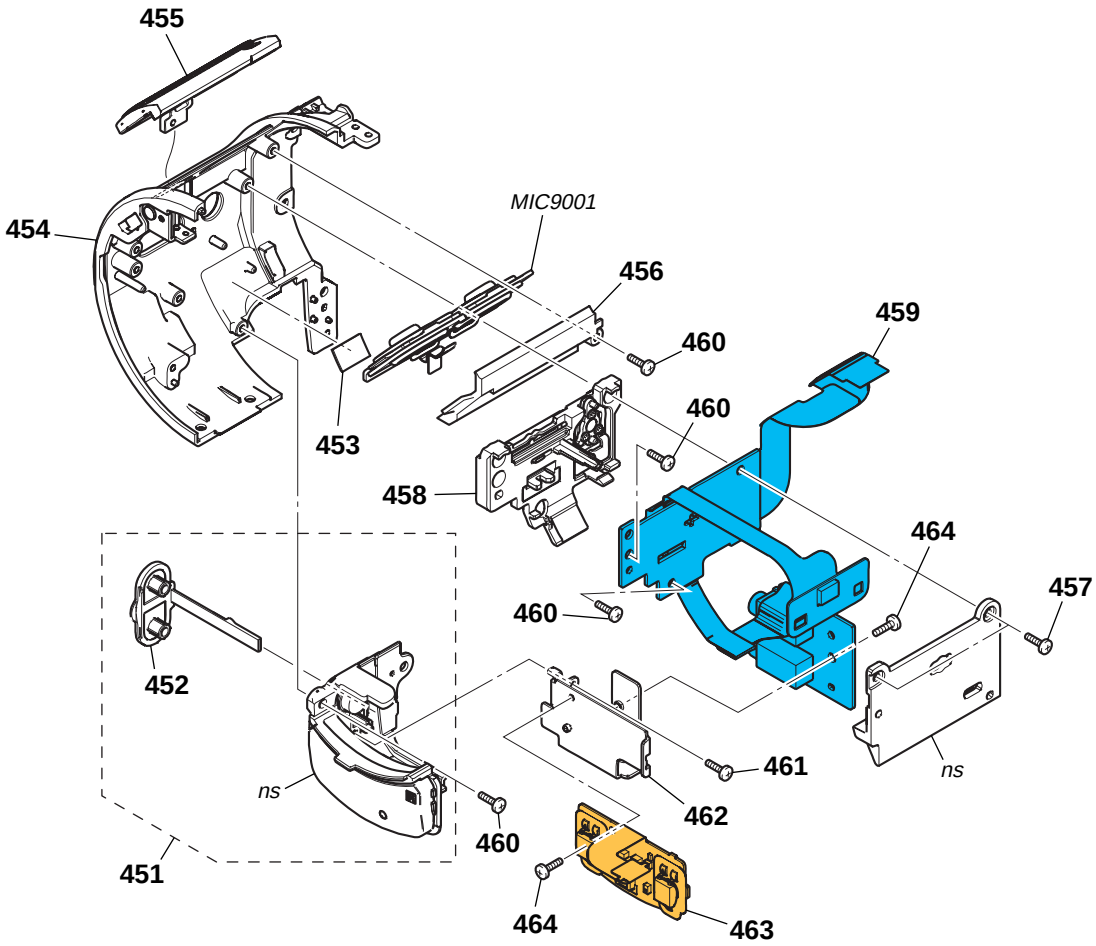


- Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description
401	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
402	1-865-410-21	FP-263 FLEXIBLE BOARD
403	2-633-540-01	SHEET (C), INSULATING
404	1-865-842-11	PWB, FP-284 FLEXIBLE
405	2-633-534-01	HOLDER, CAPACITOR
406	2-633-524-01	GUARD, CAPACITOR FLEXIBLE
407	2-633-541-01	SHEET (I), INSULATING
⚠408	A-1110-908-A	FP-249 BOARD, COMPLETE
409	X-2059-608-1	FRAME ASSY, CS
⚠C901	1-112-343-11	CAP, ELECT 43µF 330V
⚠C902	1-112-343-11	CAP, ELECT 43µF 330V

5-1-10. LENS CABINET (L) ASSEMBLY

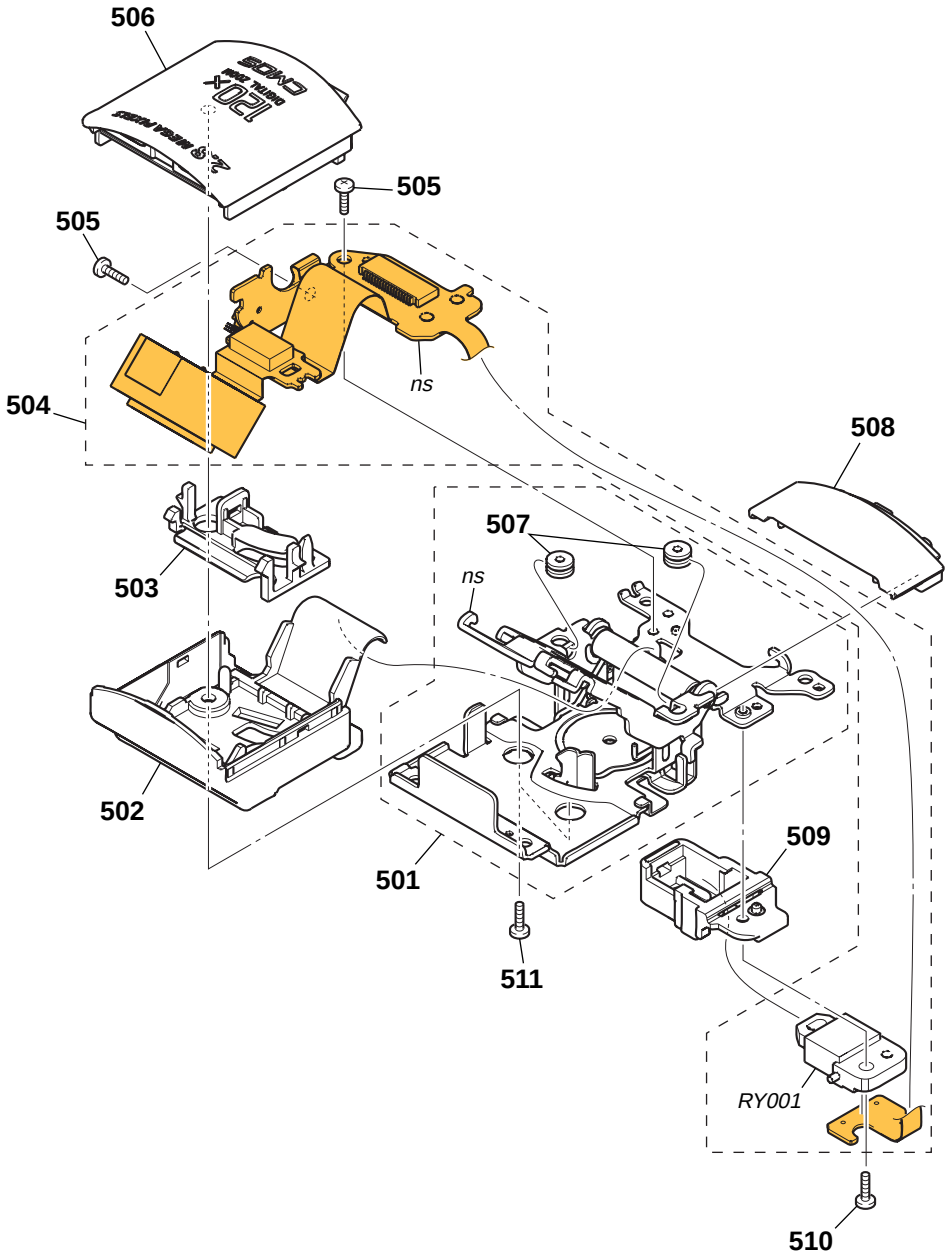
ns: not supplied



Ref. No.	Part No.	Description
451	X-2059-611-1	BASE ASSY, R WINDOW
452	2-633-523-01	COVER, M JACK
453	2-633-537-01	SHEET, L RADIATION
454	X-2059-609-1	CABINET (L) ASSY (J) (B), LENS (BLACK) (J)
454	X-2059-613-1	CABINET (L) ASSY (E), LENS (BLACK) (EXCEPT J)
454	X-2059-619-1	CABINET (L) ASSY (J) (S), LENS (SILVER)
455	X-2059-607-1	BASE (R) ASSY, MICROPHONE
456	X-2059-715-1	CASE (L) ASSY, MICROPHONE
457	2-635-562-31	SCREW (M1.7)
458	X-2059-606-1	BUTTON ASSY, L
459	A-1110-904-A	FP-245 BOARD, COMPLETE
460	2-635-562-11	SCREW (M1.7)
461	3-078-890-01	SCREW, TAPPING
462	2-633-532-01	PLATE, NS FLEXIBLE FIXED
463	A-1110-906-A	FP-247 BOARD, COMPLETE
464	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
MIC9001	1-542-628-21	MICROPHONE UNIT

5-1-11. STROBOSCOPE BLOCK ASSEMBLY

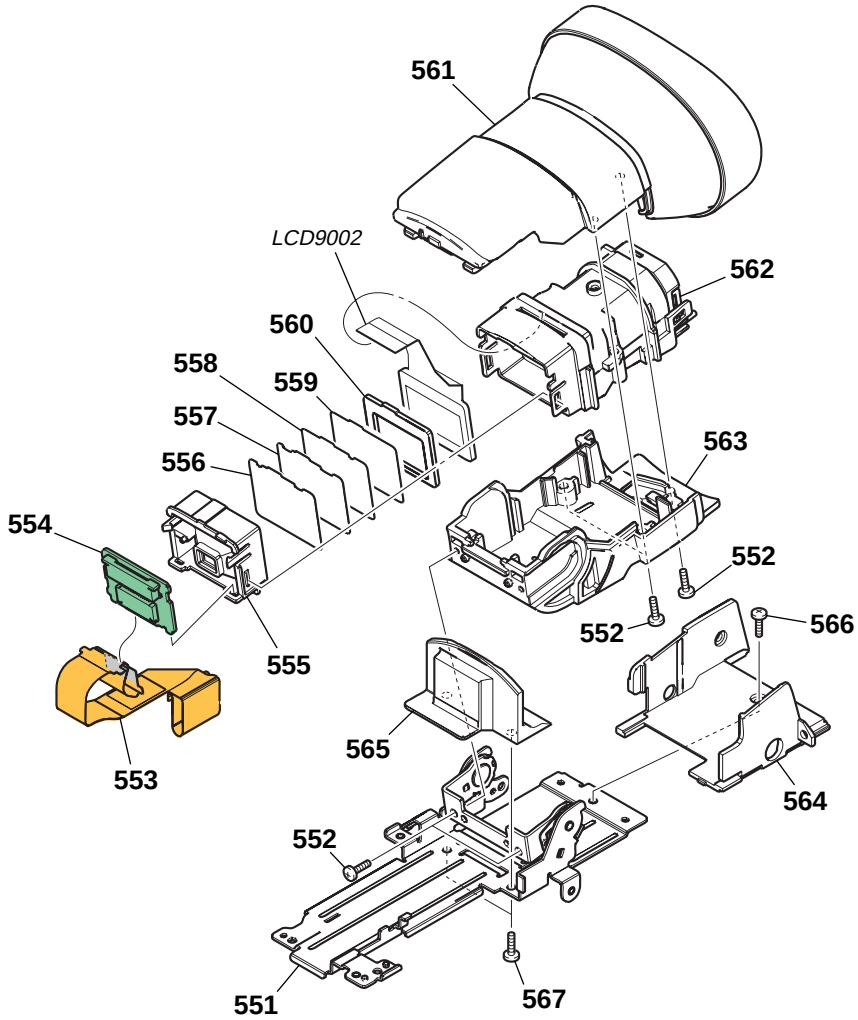
ns: not supplied



Ref. No.	Part No.	Description
501	X-2059-602-1	STROBOSCOPE ASSY
502	X-2059-714-1	CABINET ASSY, STROBOSCOPE ARM
503	2-633-578-01	CLAMP, ST FLEXIBLE
504	1-479-182-11	FLASH UNIT (FL12300)
505	3-989-735-01	SCREW (M1.7), LOCK ACE, P2
506	X-2059-603-1	CABINET (UPPER) ASSY

Ref. No.	Part No.	Description
507	3-085-389-01	CUSHION (STROBOSCOPE)
508	2-633-574-01	BASE, CENTER
509	2-633-575-01	HOLDER, SOLENOID
510	3-232-536-21	SCREW (M1.4) (EG)
511	3-080-204-21	SCREW, TAPPING, P2
RY001	1-454-984-11	SOLENOID, PLUNGER

5-1-12. EVF BLOCK ASSEMBLY

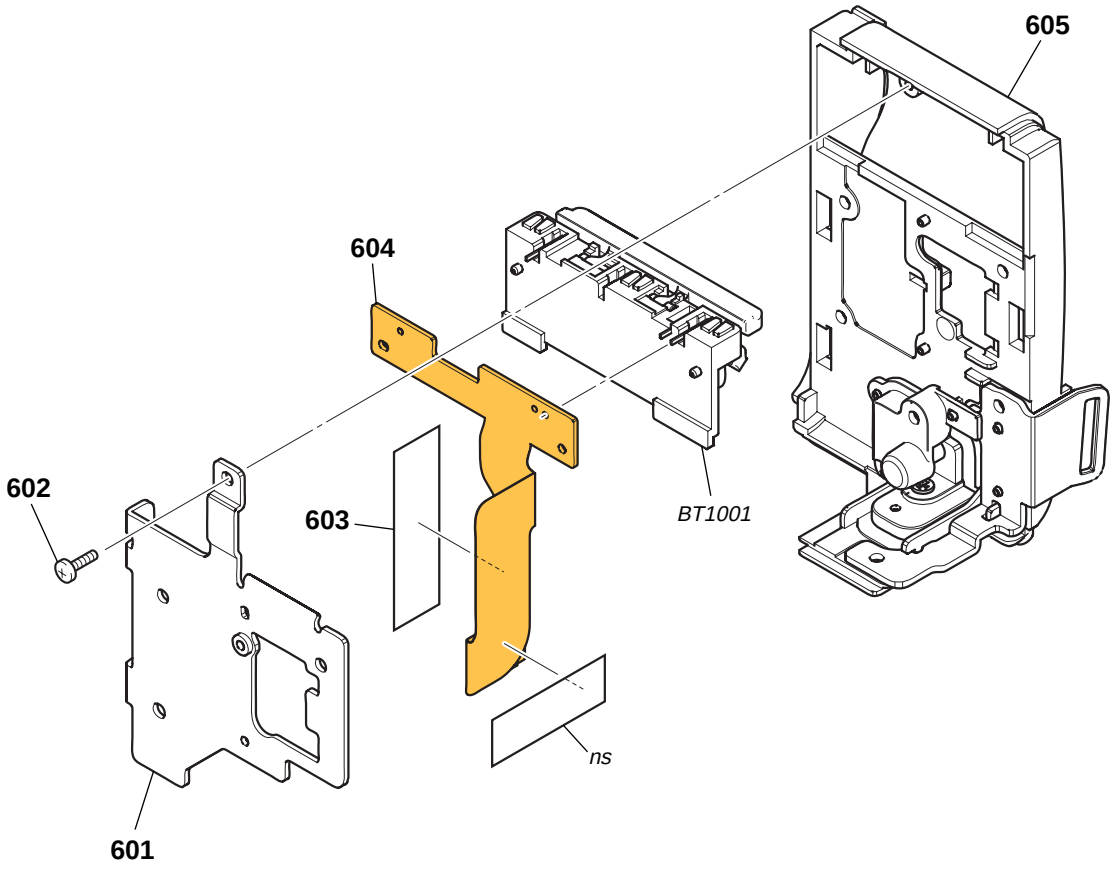


Ref. No.	Part No.	Description
551	X-2059-622-1	BASE ASSY, VF
552	3-080-204-21	SCREW, TAPPING, P2
553	1-865-407-11	FP-260 FLEXIBLE BOARD
554	A-1110-901-A	UU-001 BOARD, COMPLETE
555	2-633-598-01	GUIDE, LAMP
556	2-633-595-01	SHEET (2), VF DIFFUSION
557	2-633-597-01	SHEET (2), VF PRISM
558	2-633-596-01	SHEET (1), VF PRISM
559	2-633-594-01	SHEET (1), VF DIFFUSION
560	2-633-601-01	CUSHION, VF LCD

Ref. No.	Part No.	Description
561	X-2059-629-1	CABINET (UPPER) ASSY, VF (BLACK)
561	X-2059-631-1	CABINET (UPPER) ASSY, VF (SILVER)
562	X-2059-623-1	LENS ASSY, VF
563	X-2059-627-1	CABINET (LOWER) ASSY, VF
564	2-633-600-01	COVER (2), VF BASE
565	2-633-599-01	COVER (1), VF BASE
566	2-635-562-11	SCREW (M1.7)
567	3-078-890-01	SCREW, TAPPING
LCD9002	8-753-210-99	LCX068AK-1

5-1-13. BATTERY PANEL BLOCK ASSEMBLY

ns: not supplied

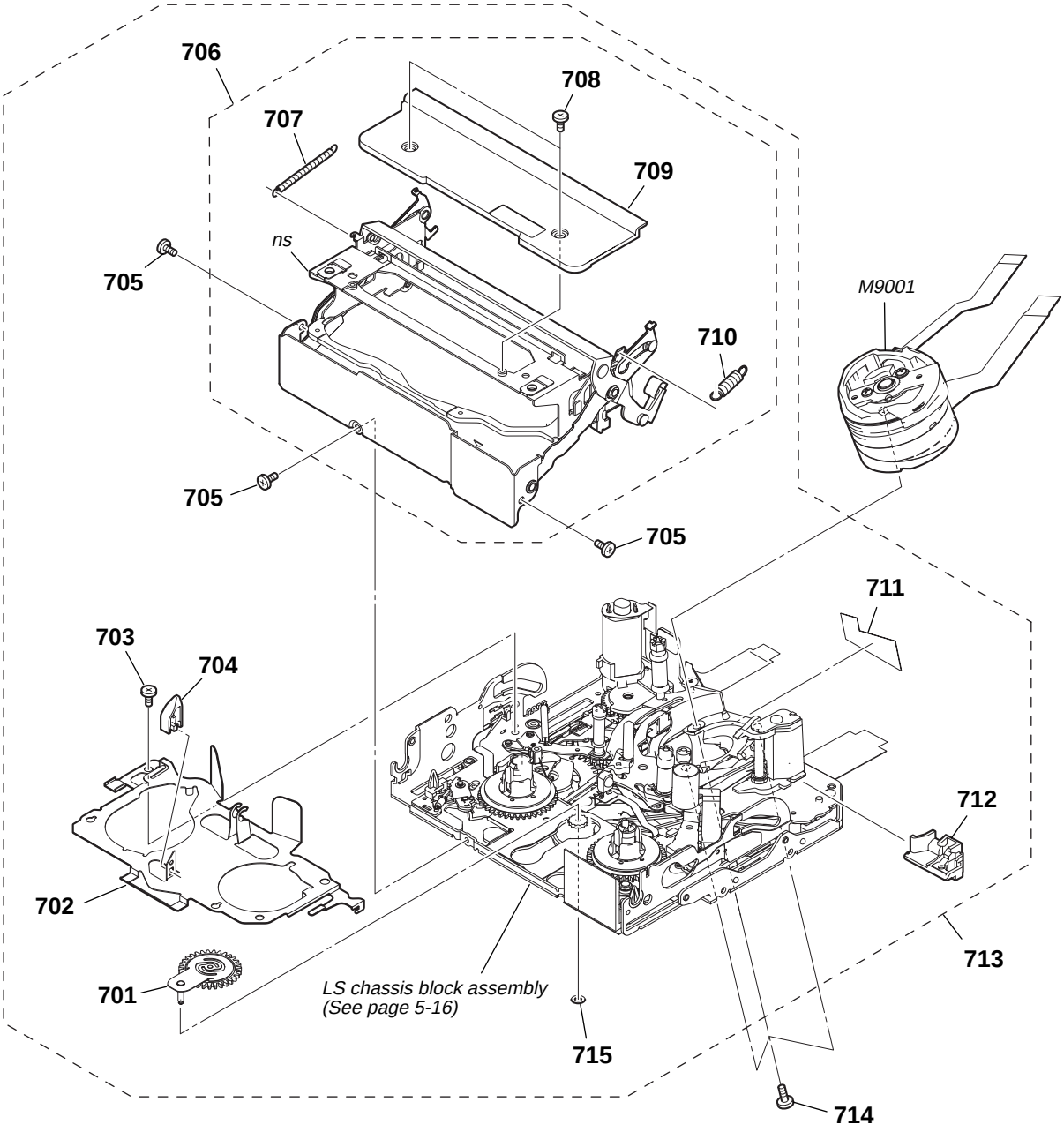


• Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description
601	2-633-659-01	RETAINER, BT TERMINAL
602	3-078-890-01	SCREW, TAPPING
603	2-636-046-01	SHEET (BT), SHIELD
604	1-865-408-11	FP-261 FLEXIBLE BOARD
605	X-2059-640-1	PANEL ASSY, BATTERY
⚠BT1001	1-694-990-11	BATTERY TERMINAL BOARD

5-1-14. MECHANISM DECK SECTION

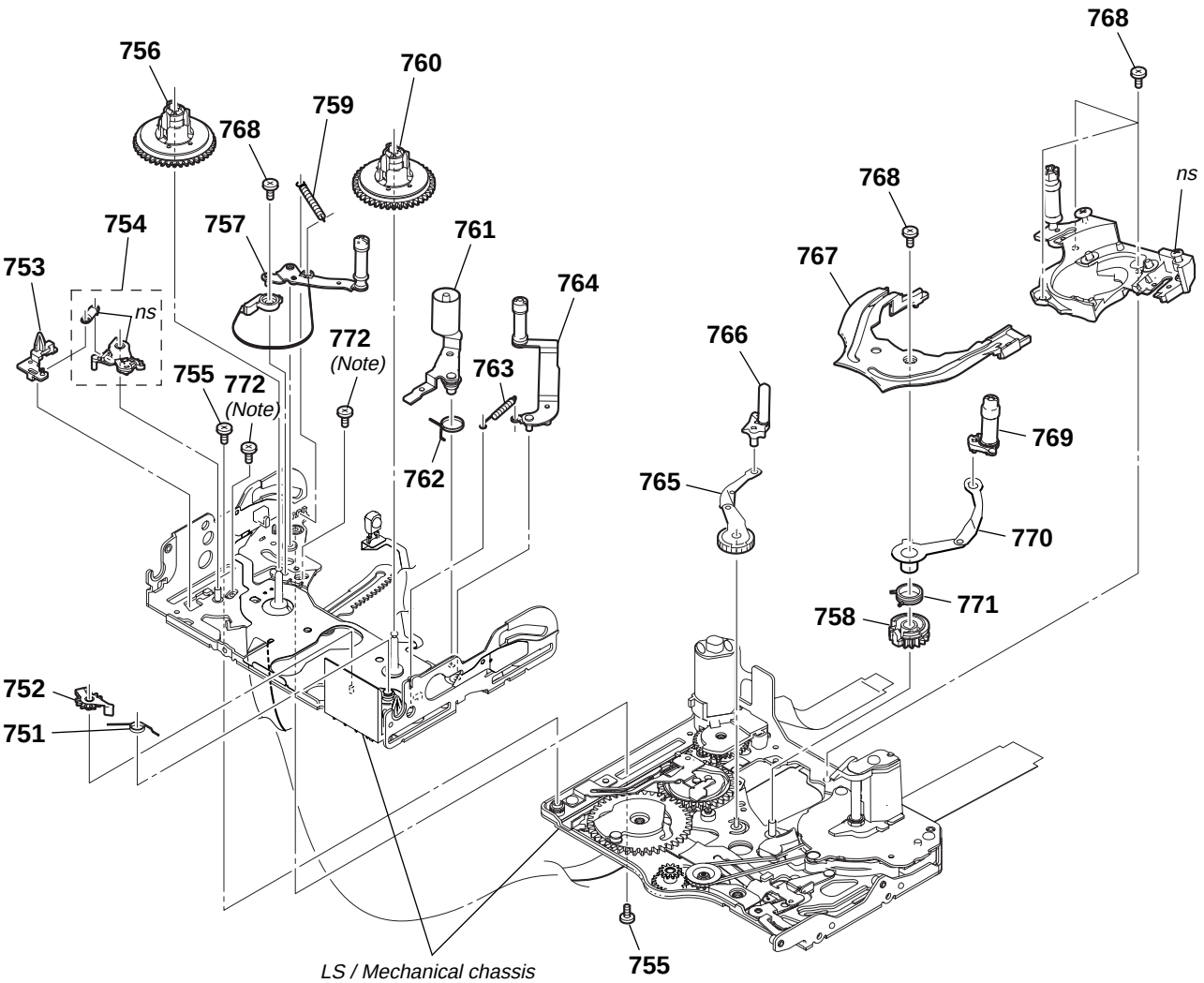
ns : not supplied



Ref. No.	Part No.	Description
701	X-2024-478-1	PENDULUM ASSY
702	2-342-917-01	LED BASE
703	7-627-850-77	SCREW PRECISION +P M1.4X1.8 TYPE3
704	3-079-366-11	RELEASE, REEL LOCK
705	3-703-816-08	SCREW (M1.4X1.4), SPECIAL HEAD
706	X-2024-450-1	COMPARTMENT ASSY, CASSETTE
707	2-342-926-01	SPRING (ARM S), TENSION COIL
708	2-546-417-01	SCREW (M1.4)
709	2-342-933-01	PLATE, TOP
710	2-342-927-01	SPRING (ARM T), TENSION COIL
711	2-541-585-01	SHEET, FLEXIBLE ADHESIVE
712	2-342-918-01	TG6 CATCHER
713	A-1080-997-A	MD(N100)SUB ASSY_A
714	3-703-816-13	SCREW (M1.4X2.0), SPECIAL HEAD
715	3-315-414-31	WASHER
M9001	A-1137-055-A	DRUM (DEH-33D-R) (SERVICE)

5-1-15. LS/MECHANICAL CHASSIS BLOCK ASSEMBLY-1

ns : not supplied



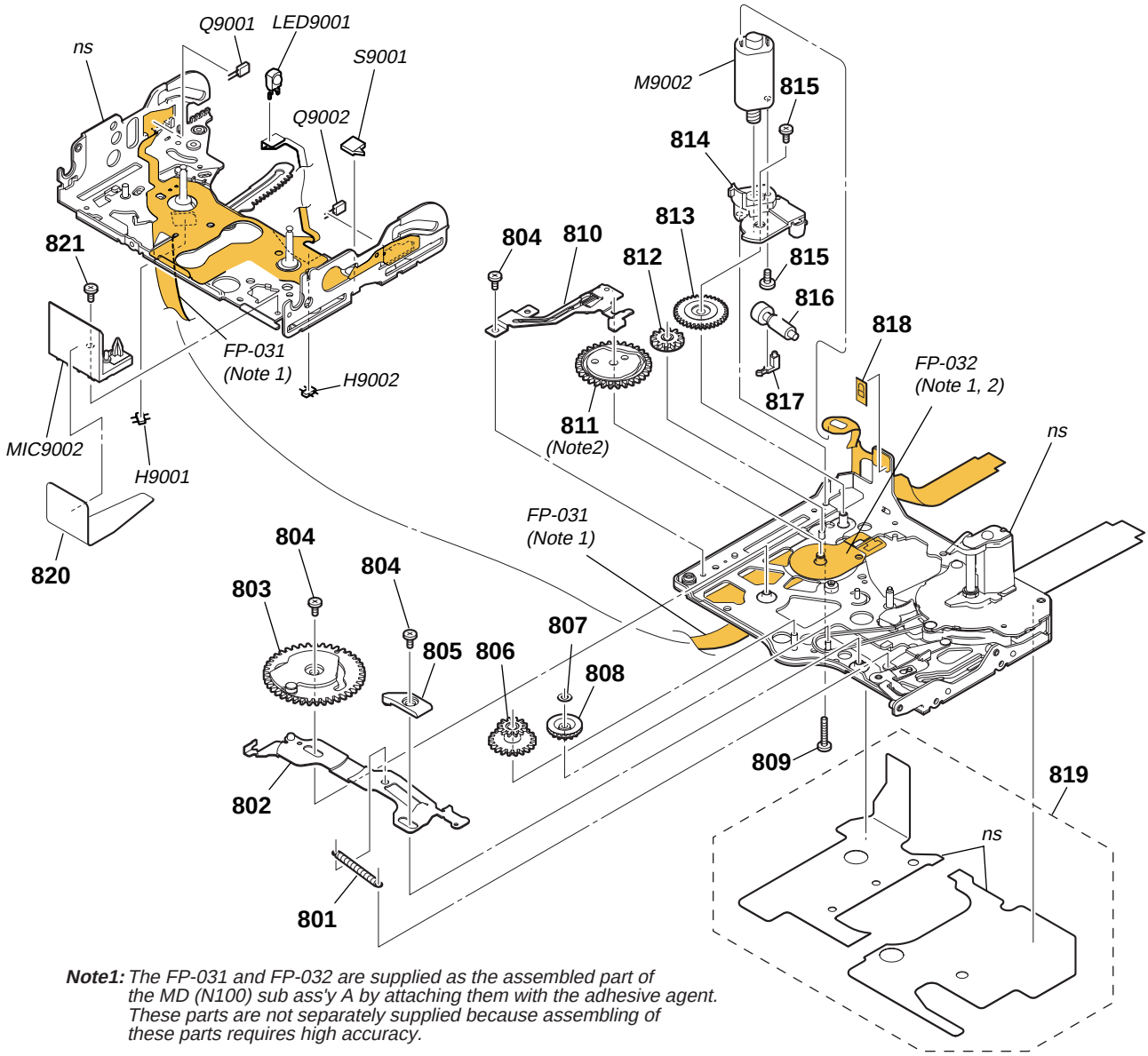
Note: *These two screws are the fixing screws of the LS cam plate.*
These two fixing screws are used for adjsting the LS cam plate position.
(refar to 4-2. LS cam adjustment of DV mechanical adjustment manual IX)

Ref. No.	Part No.	Description
751	2-342-759-01	SPRING, RVS BRAKE
752	A-1083-005-A	BLOCKASSY, RVS BRAKE
753	2-342-731-01	POSITIONING, S
754	A-1083-006-A	BLOCKASSY, S BRAKE
755	3-075-097-11	SCREW (M1.4X1.4), SPECIAL HEAD
756	X-2024-473-1	TABLE ASSY,S REEL
757	A-1083-007-B	BLOCKASSY, TENSION REGULATOR
758	2-342-705-01	GEAR (T), GL
759	2-342-902-01	SPRING, TENSION REGULATOR
760	X-2024-474-1	TABLE ASSY,T REEL
761	X-2024-476-1	ARM ASSY,PINCH

Ref. No.	Part No.	Description
762	2-342-906-01	SPRING (PINCH RETURN), TORSION
763	2-342-626-01	SPRING (RETURN TG6), EXTENSION
764	A-1083-002-A	BLOCK ASSY,TG6
765	X-2024-468-1	ARM ASSY(S), GL
766	X-2024-465-1	COASTER (S) ASSY
767	2-342-612-01	RAIL
768	3-703-816-13	SCREW (M1.4X2.0), SPECIAL HEAD
769	X-2024-466-1	COASTER (T) ASSY
770	X-2024-469-1	ARM (T) ASSY, GL
771	2-342-716-01	SPRING (T), TORSION COIL
772	3-703-816-08	SCREW (M1.4X1.4), SPECIAL HEAD (for adjustment)

5-1-16. LS/MECHANICAL CHASSIS BLOCK ASSEMBLY-2

ns : not supplied



Note1: *The FP-031 and FP-032 are supplied as the assembled part of the MD (N100) sub ass'y A by attaching them with the adhesive agent. These parts are not separately supplied because assembling of these parts requires high accuracy.*

Note2: *The mode switch (S9003) function works when the contactor of the FP-032 contacts with the bottom surface of wiper of the mode gear ass'y.*

Ref. No.	Part No.	Description
801	2-342-624-01	SPRING (PINCH LIMITTER), EXTEN
802	X-2024-463-1	SLIDER ASSY, MODE
803	X-2024-462-1	GEAR ASSY, CAM
804	3-075-097-11	SCREW (M1.4X1.4), SPECIAL HEAD
805	2-342-625-01	RETAINER, LEVER EJ
806	2-342-621-01	GEAR, RELAY
807	3-315-414-31	WASHER
808	2-342-620-01	GEAR, CONVERSION
809	3-084-377-01	HEAD (SCREW M1.2)
810	X-2024-460-1	BASE ASSY, CAM
811	X-2024-461-1	GEAR ASSY, MODE
812	2-342-615-01	GEAR,NO.2
813	2-342-691-01	GEAR,NO.1
814	2-342-688-01	MOTOR HOLDER
815	3-895-822-71	SCREW (M1.2X2), SPECIAL, 0

Ref. No.	Part No.	Description
816	2-342-689-01	WORM SHAFT (2J)
817	2-342-690-01	BASE, MOTOR HOLDER
818	1-677-049-11	FP-228 FLEXIBLE BOARD (DEW SENSOR)
819	2-342-686-01	COVER, CAPSTAN
820	2-541-984-01	MIC COVER
821	3-703-816-13	SCREW (M1.4X2.0), SPECIAL HEAD
H9001	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (S REEL)
H9002	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (T REEL)
LED9001	6-500-652-01	DIODE GL453SE0000F (TAPE LED)
M9002	X-2024-464-1	MOTOR ASSY (LOADING)
MIC9003	1-818-576-11	PIN, CONNECTOR (WITH DETECTION SWITCH)
S9001	1-786-448-21	SWITCH, PUSH (1 KEY) (CC. DOWN)
Q9001	6-550-672-01	TRANSISTOR PT4850FJE00F (TAPE END)
Q9002	6-550-672-01	TRANSISTOR PT4850FJE00F (TAPE TOP)

Electrical parts list of the EE-001 board is not shown.
Pages 5-18 and 5-19 are not shown.

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	(Not supplied)	FP-031 FLEXIBLE BOARD
		**********
		(This flexible board is included in MD (N100) SUB ASSY A (A-1080-997-A).)
		< HOLE ELEMENT >
H9001	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (S REEL)
H9002	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (T REEL)
		< LED >
LED9001	6-500-652-01	DIODE GL453SE0000F (TAPE LED)
		< CONNECTOR >
MIC9003	1-818-576-11	PIN, CONNECTOR (WITH DETECTION SWITCH)
		< TRANSISTOR >
Q9001	6-550-672-01	TRANSISTOR PT4850FJE00F (TAPE END)
Q9002	6-550-672-01	TRANSISTOR PT4850FJE00F (TAPE TOP)
		< SWITCH >
S9001	1-786-448-22	SWITCH, PUSH (1 KEY) (CC DOWN)
	(Nut supplied)	FP-032 FLEXIBLE BOARD
		**********
		(This flexible board with S9003 is included in MD (N100) SUB ASSY A (A-1080-997-A).)
	1-677-049-11	FP-228 FLEXIBLE BOARD (DEW SENSOR)
		**********
	A-1110-904-A	FP-245 BOARD, COMPLETE
		**********
		< CAPACITOR >
C8501	1-107-726-91	CERAMIC CHIP 0.01uF 10% 16V
		< CONNECTOR >
CN8501	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
CN8502	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
		< DIODE >
D8501	6-500-252-01	DIODE SML-512WWT86 (FLASH CHARGE)
		< FERRITE BEAD >
FB8501	1-400-619-11	BEAD, FERRITE (CHIP) (1608)
FB8502	1-414-760-21	BEAD, FERRITE (CHIP) (1608)
FB8503	1-414-760-21	BEAD, FERRITE (CHIP) (1608)
FB8504	1-414-760-21	BEAD, FERRITE (CHIP) (1608)
FB8506	1-414-760-21	BEAD, FERRITE (CHIP) (1608)
FB8508	1-414-760-21	BEAD, FERRITE (CHIP) (1608)
FB8509	1-414-760-21	BEAD, FERRITE (CHIP) (1608)

Ref. No.	Part No.	Description
		< JACK >
J8501	1-691-737-41	JACK (SMALL TYPE) (MIC)
J8502	1-569-950-41	JACK (SMALL TYPE) (HEADPHONE)
		< TRANSISTOR >
Q8501	6-550-119-01	TRANSISTOR DTC144EMT2L
		< RESISTOR >
R8501	1-216-817-11	METAL CHIP 470 5% 1/10W
R8502	1-216-864-11	SHORT CHIP 0
R8503	1-216-838-11	METAL CHIP 27K 5% 1/10W
R8504	1-216-828-11	METAL CHIP 3.9K 5% 1/10W
R8508	1-216-295-91	SHORT CHIP 0
R8509	1-216-864-11	SHORT CHIP 0
R8510	1-216-864-11	SHORT CHIP 0
R8511	1-216-295-91	SHORT CHIP 0
R8515	1-216-821-11	METAL CHIP 1K 5% 1/10W
R8516	1-216-864-11	SHORT CHIP 0
R8517	1-216-864-11	SHORT CHIP 0
R8518	1-216-864-11	SHORT CHIP 0
R8519	1-216-864-11	SHORT CHIP 0
		< SWITCH >
S8501	1-771-138-82	SWITCH, KEY BOARD (FLASH)
S8502	1-786-367-11	SWITCH, SLIDE (NIGHTSHOT PLUS)
		< VARISTOR >
VD8501	1-801-862-11	VARISTOR, CHIP (1608)
VD8502	1-801-862-11	VARISTOR, CHIP (1608)
VD8503	1-801-862-11	VARISTOR, CHIP (1608)
VD8504	1-801-862-11	VARISTOR, CHIP (1608)
VD8505	1-801-862-11	VARISTOR, CHIP (1608)
VD8506	1-801-862-11	VARISTOR, CHIP (1608)
VD8507	1-801-862-11	VARISTOR, CHIP (1608)
	A-1110-905-A	FP-246 BOARD, COMPLETE
		**********
		< PHOTO INTERRUPTER >
PH001	8-749-016-83	IC GP1S092HCPI
PH002	8-749-016-83	IC GP1S092HCPI
		< RESISTOR >
R001	1-216-815-11	METAL CHIP 330 5% 1/10W
	A-1110-906-A	FP-247 BOARD, COMPLETE
		**********
		< CAPACITOR >
C001	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C002	1-137-710-11	CERAMIC CHIP 10uF 20% 6.3V

Ref. No.	Part No.	Description
		< DIODE >
D001	8-719-064-07	DIODE SML-310LTT86 (CAMERA RECORDING)
D003	8-719-073-01	DIODE MA111-(K8).S0
D004	8-719-079-78	DIODE DCZ2805 (IR EMITTER/NIGHTSHOT)
D005	8-719-079-78	DIODE DCZ2805 (IR EMITTER/NIGHTSHOT)
		< IC >
IC001	6-600-163-01	IC RS-770
		< TRANSISTOR >
Q001	8-729-049-92	TRANSISTOR 2SC5585H-T2L
		< RESISTOR >
R005	1-216-821-11	METAL CHIP 1K 5% 1/10W
	1-865-395-21	FP-248 FLEXIBLE BOARD ********** (S001 and S002 are not supplied, but there are included in this flexible board.)
⚠	A-1110-908-A	FP-249 BOARD, COMPLETE **********
		< CAPACITOR >
C801	1-125-837-91	CERAMIC CHIP 1uF 10% 6.3V
C802	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C803	1-165-875-11	CERAMIC CHIP 10uF 10% 10V
		< CONNECTOR >
CN801	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
		< DIODE >
D801	8-719-073-01	DIODE MA111-(K8).S0
⚠D803	6-501-096-01	DIODE CRF02 (TE85R)
		< IC >
⚠IC801	6-707-554-01	IC TPS65552DGQR
		< COIL >
L801	1-412-027-11	INDUCTOR 2.2uH
		< TRANSISTOR >
Q801	6-550-242-01	TRANSISTOR DTC114EMT2L
Q802	8-729-013-31	TRANSISTOR 2SA1588-OY-TE85L
⚠Q803	6-550-656-01	TRANSISTOR CY25BAJ-8F-T23
		< RESISTOR >
R801	1-218-965-11	RES-CHIP 10K 5% 1/16W
R802	1-218-947-11	RES-CHIP 330 5% 1/16W
R803	1-208-947-11	METAL CHIP 330K 0.5% 1/16W
R805	1-208-935-11	METAL CHIP 100K 0.5% 1/16W
R807	1-216-295-91	SHORT CHIP 0
R808	1-216-803-11	METAL CHIP 33 5% 1/10W
R809	1-216-857-11	METAL CHIP 1M 5% 1/10W

Ref. No.	Part No.	Description
R810	1-216-295-91	SHORT CHIP 0
		< TRANSFORMER >
⚠T801	1-443-568-21	TRANSFORMER, D.C.-D.C.CONVERTER
	1-865-408-11	FP-261 FLEXIBLE BOARD ********** (BT1001 is not included in this flexible board.)
		< BATTERY TERMINAL >
⚠BT1001	1-694-990-11	BATTERY TERMINAL BOARD
	1-865-409-11	FP-262 FLEXIBLE BOARD ********** (J1001 is not included in this flexible board.)
		< JACK >
⚠J1001	1-817-361-11	DC-IN CONNECTOR (DC IN)
	1-865-410-21	FP-263 FLEXIBLE BOARD ********** (S002 is not supplied, but it is included in this flexible board.)
	1-865-842-11	FP-284 FLEXIBLE BOARD ********** (C901 and C902 are not included in this flexible board.)
		< CAPACITOR >
⚠C901	1-112-343-11	CAP, ELECT 43uF 330V
⚠C902	1-112-343-11	CAP, ELECT 43uF 330V
	A-1115-409-A	HH-001 BOARD, COMPLETE **********
		< CONNECTOR >
CN101	1-816-649-31	FFC/FPC CONNECTOR (LIF) 22P
CN105	1-818-607-12	CONNECTOR, SQUARE TYPE 10P (COMPONENT OUT)
CN106	1-815-794-21	CONNECTOR (MULTIPLE) (A/V OUT)
		< RESISTOR >
R102	1-216-864-11	SHORT CHIP 0
	A-1110-898-A	II-001 BOARD, COMPLETE **********
		< CONNECTOR >
CN102	1-816-645-31	FFC/FPC CONNECTOR (LIF) 14P
CN103	1-794-276-11	CONNECTOR, SQUARE TYPE 4P (DV)
CN104	1-794-962-11	CONNECTOR, SQUARE TYPE (USB 5P) (USB)

Electrical parts list of the NN-001 and OO-001 boards are not shown.
Pages 5-22 to 5-26 are not shown.

• Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description			
	A-1110-899-A	PP-001 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C8701	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C8702	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C8703	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8704	1-165-799-11	TANTAL. CHIP	22uF	20%	4V
C8706	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C8708	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8709	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8710	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8711	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8712	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C8714	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C8715	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C8716	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C8717	1-137-700-11	TANTAL. CHIP	10uF	20%	6.3V
C8719	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C8720	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C8721	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C8722	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C8724	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C8725	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C8727	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C8728	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C8729	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
CN8701	1-794-410-11	CONNECTOR, FPC (ZIF) 27P			
CN8702	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P			
CN8703	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P			
CN8704	1-785-905-11	CONNECTOR, FFC/FPC (ZIF) 24P			
CN8705	1-794-322-11	CONNECTOR, FFC/FPC (ZIF) 6P			
		< DIODE >			
D8701	8-719-056-23	DIODE MA2S111-(K8).SO			
D8702	8-719-074-67	DIODE EDZ-TE61-5.6B			
		< FERRITE BEAD >			
FB8701	1-414-760-21	FERRITE, EMI (SMD) (1608)			
		< IC >			
IC8701	8-753-229-95	IC CXM3006CER-T4			
		< COIL >			
L8701	1-400-137-11	INDUCTOR	10uH		
L8702	1-400-137-11	INDUCTOR	10uH		
L8703	1-400-137-11	INDUCTOR	10uH		
L8704	1-400-137-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q8701	8-729-427-67	TRANSISTOR	XP421F-TXE		
Q8702	8-729-427-37	TRANSISTOR	XP411F-TXE		
Q8706	8-729-037-61	TRANSISTOR	UN9113J-(TX).SO		
Q8707	8-729-054-48	TRANSISTOR	UP04601008S0		
Q8708	8-729-054-48	TRANSISTOR	UP04601008S0		
Q8709	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q8710	6-550-119-01	TRANSISTOR	DTC144EMT2L		
Q8711	6-550-232-01	TRANSISTOR	2SA2029T2LQ/R		
Q8712	8-729-041-23	TRANSISTOR	NDS356AP		
		< RESISTOR >			
R8701	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R8703	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R8704	1-216-864-11	SHORT CHIP	0		
R8705	1-216-864-11	SHORT CHIP	0		
R8706	1-216-864-11	SHORT CHIP	0		
R8708	1-218-990-81	SHORT CHIP	0		
R8709	1-216-864-11	SHORT CHIP	0		
R8710	1-218-989-11	RES-CHIP	1M	5%	1/16W
R8711	1-218-990-81	SHORT CHIP	0		
R8712	1-218-975-11	RES-CHIP	68K	5%	1/16W
R8714	1-218-949-11	RES-CHIP	470	5%	1/16W
R8715	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R8716	1-208-695-11	METAL CHIP	3.3K	0.5%	1/16W
R8717	1-218-953-11	RES-CHIP	1K	5%	1/16W
R8718	1-218-969-11	RES-CHIP	22K	5%	1/16W
R8719	1-218-990-81	SHORT CHIP	0		
R8720	1-208-934-11	METAL CHIP	91K	0.5%	1/16W
R8721	1-208-643-11	METAL CHIP	22	0.5%	1/16W
R8722	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R8723	1-208-911-11	METAL CHIP	10K	0.5%	1/16W
R8724	1-218-969-11	RES-CHIP	22K	5%	1/16W
R8725	1-218-950-11	RES-CHIP	560	5%	1/16W
R8727	1-218-969-11	RES-CHIP	22K	5%	1/16W
R8728	1-218-990-81	SHORT CHIP	0		
R8729	1-218-990-81	SHORT CHIP	0		
R8730	1-218-953-11	RES-CHIP	1K	5%	1/16W
R8731	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R8732	1-218-990-81	SHORT CHIP	0		
R8735	1-218-977-11	RES-CHIP	100K	5%	1/16W
R8736	1-218-978-11	RES-CHIP	120K	5%	1/16W
R8737	1-218-990-81	SHORT CHIP	0		
R8739	1-218-989-11	RES-CHIP	1M	5%	1/16W
R8740	1-218-990-81	SHORT CHIP	0		
R8741	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB8701	1-234-369-21	RES, NETWORK 10 (1005 x4)			

Ref. No.	Part No.	Description
	A-1110-900-A	RR-001 BOARD, COMPLETE
		**********
		< BATTERY >
⚠BT9001	1-756-128-11	BATTERY, LITHIUM (SECONDARY)
		< CONNECTOR >
CN9001	1-817-920-11	CONNECTOR, FPC (ZIF) 80P
CN9002	1-816-649-31	FFC/FPC CONNECTOR (LIF) 22P
CN9003	1-816-645-31	FFC/FPC CONNECTOR (LIF) 14P
CN9004	1-794-410-11	CONNECTOR, FPC (ZIF) 27P
CN9005	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P
CN9006	1-778-506-21	PIN, CONNECTOR (PC BOARD) 2P

• Refer to page 5-1 for mark ⚠.

RR-001

Ref. No.	Part No.	Description			
CN9007	1-817-705-11	CONNECTOR, FPC (LIF (NON-ZIF)) 10P			
		< DIODE >			
D9001	6-500-750-01	DIODE NSAD500H-T1-A			
D9002	8-719-056-85	DIODE UDZ-TE-17-8.2B			
D9003	8-719-056-85	DIODE UDZ-TE-17-8.2B			
D9004	8-719-056-85	DIODE UDZ-TE-17-8.2B			
D9005	8-719-056-85	DIODE UDZ-TE-17-8.2B			
D9006	8-719-078-02	DIODE 1SS357 (T3SONY1)			
D9007	6-500-750-01	DIODE NSAD500H-T1-A			
D9008	8-719-056-61	DIODE MAZS082008SO			
D9009	8-719-056-61	DIODE MAZS082008SO			
D9010	8-719-056-61	DIODE MAZS082008SO			
D9011	8-719-056-61	DIODE MAZS082008SO			
D9012	8-719-422-64	DIODE MA8062-M			
D9013	8-719-422-64	DIODE MA8062-M			
D9014	8-719-422-64	DIODE MA8062-M			
D9015	8-719-422-64	DIODE MA8062-M			
D9016	8-719-422-64	DIODE MA8062-M			
D9017	6-500-289-01	DIODE MAZW082H0LS0			
		< FERRITE BEAD >			
FB9001	1-414-760-21	BEAD, FERRITE (CHIP) (1608)			
FB9002	1-414-760-21	BEAD, FERRITE (CHIP) (1608)			
FB9003	1-500-444-11	FERRITE, EMI (SMD) (1608)			
FB9004	1-500-444-11	FERRITE, EMI (SMD) (1608)			
FB9005	1-500-444-11	FERRITE, EMI (SMD) (1608)			
FB9006	1-500-444-11	FERRITE, EMI (SMD) (1608)			
		< LINE FILTER >			
LF9002	1-456-583-11	COMMON MODE CHOKE COIL			
		< RESISTOR >			
R9001	1-216-864-11	SHORT CHIP	0		
R9002	1-216-864-11	SHORT CHIP	0		
R9003	1-216-864-11	SHORT CHIP	0		
R9004	1-216-864-11	SHORT CHIP	0		
R9005	1-216-864-11	SHORT CHIP	0		
R9006	1-216-864-11	SHORT CHIP	0		
R9007	1-216-864-11	SHORT CHIP	0		
R9008	1-216-295-91	SHORT CHIP	0		
R9009	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9010	1-218-965-11	RES-CHIP	10K	5%	1/16W
R9011	1-216-295-91	SHORT CHIP	0		
R9012	1-218-970-11	RES-CHIP	27K	5%	1/16W
R9013	1-218-990-81	SHORT CHIP	0		
R9014	1-218-990-81	SHORT CHIP	0		
R9015	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R9016	1-216-295-91	SHORT CHIP	0		
R9017	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R9018	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R9019	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R9020	1-218-964-11	RES-CHIP	8.2K	5%	1/16W
R9021	1-234-400-21	CONDUCTOR, NETWORK (2010X4)			

Ref. No.	Part No.	Description
		< SWITCH >
S9001	1-771-138-82	SWITCH, KEY BOARD (RESET)
S9002	1-771-138-82	SWITCH, KEY BOARD (DISPLAY/BATT INFO)
S9003	1-771-731-21	SWITCH, SLIDE (AUTO LOCK)
		< VARISTOR >
VDR901	1-803-974-21	VARISTOR, CHIP (1608)
VDR902	1-803-974-21	VARISTOR, CHIP (1608)
VDR903	1-803-974-21	VARISTOR, CHIP (1608)
VDR904	1-803-974-21	VARISTOR, CHIP (1608)
VDR907	1-801-862-11	VARISTOR, CHIP (1608)

Electrical parts list of the TT-001 board is not shown.
Pages 5-29 to 5-39 are not shown.

UU-001 **WW-001** **YY-001**

Ref. No.	Part No.	Description			
	A-1110-901-A	UU-001 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C9801	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C9802	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C9803	1-164-505-11	CERAMIC CHIP	2.2uF		16V
		< CONNECTOR >			
CN9802	1-691-356-21	CONNECTOR, FFC/FPC (ZIF) 18P			
CN9803	1-794-410-11	CONNECTOR, FPC (ZIF) 27P			
		< DIODE >			
D9801	6-501-154-01	DIODE NSCW455AT-TY5 (EVF BACKLIGHT)			
		< IC >			
IC9801	8-759-581-11	IC NJM2125F (TE2)			
		< COIL >			
L9801	1-414-771-91	INDUCTOR	10uH		
		< TRANSISTOR >			
Q9801	8-729-054-48	TRANSISTOR	UP04601008S0		
Q9802	8-729-054-48	TRANSISTOR	UP04601008S0		
		< RESISTOR >			
R9801	1-216-864-11	SHORT CHIP	0		
R9802	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R9803	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R9804	1-218-956-11	RES-CHIP	1.8K	5%	1/16W
R9805	1-216-085-91	RES-CHIP	33K	5%	1/10W
R9806	1-211-983-11	METAL CHIP	39	0.5%	1/10W

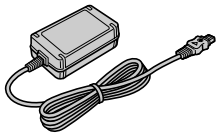
	A-1110-902-A	WW-001 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C302	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
CN301	1-816-645-31	FFC/FPC CONNECTOR (LIF) 14P			
CN0302	1-817-827-11	MEMORY STICK DUO CONNECTOR			
		< DIODE >			
D301	6-500-604-01	DIODE CL-270HR-C-TSL (MS ACCESS)			
		< IC >			
IC301	6-706-965-01	IC TK70529SCL-G			
		< TRANSISTOR >			
Q301	6-550-119-01	TRANSISTOR	DTC144EMT2L		

Ref. No.	Part No.	Description			
		< RESISTOR >			
R301	1-218-949-11	RES-CHIP	470	5%	1/16W
R302	1-218-953-11	RES-CHIP	1K	5%	1/16W
R303	1-216-864-11	SHORT CHIP	0		
R304	1-216-864-11	SHORT CHIP	0		
R305	1-216-864-11	SHORT CHIP	0		
R306	1-216-864-11	SHORT CHIP	0		
R307	1-216-295-91	SHORT CHIP	0		

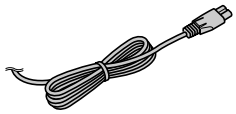
	A-1110-903-A	YY-001 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C9201	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
		< CONNECTOR >			
CN9201	1-794-410-11	CONNECTOR, FPC (ZIF) 27P			
CN9202	1-816-644-31	FFC/FPC CONNECTOR (LIF) 12P			
CN9204	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P			
CN9205	1-815-333-11	CONNECTOR, FPC (ZIF) 33P			
CN9206	1-815-333-11	CONNECTOR, FPC (ZIF) 33P			
		< DIODE >			
D9202	8-719-422-64	DIODE MA8062-M			
D9203	6-500-289-01	DIODE MAZW082H0LS0			
		< RESISTOR >			
R9205	1-216-295-91	SHORT CHIP	0		
R9206	1-216-295-91	SHORT CHIP	0		
R9207	1-218-937-11	RES-CHIP	47	5%	1/16W
R9208	1-216-019-00	RES-CHIP	56	5%	1/10W
R9209	1-216-019-00	RES-CHIP	56	5%	1/10W
R9211	1-218-951-11	RES-CHIP	680	5%	1/16W

• E MODEL

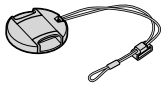
Checking supplied accessories. **to J MODEL**



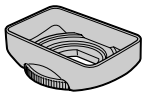
AC Adaptor (1)
(AC-L15A/L15B)
1-479-283-12



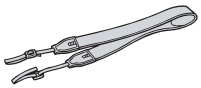
Power cord (1)
⚠ 1-776-985-11 (KR)
⚠ 1-782-476-51 (CN)
⚠ 1-790-107-42 (US, CND)
⚠ 1-790-732-71 (JE)
⚠ 1-823-946-12 (HC1E: AEP, NE, E)
⚠ 1-827-945-12 (AUS)
⚠ 1-827-946-21 (UK)
⚠ 1-830-518-11 (HC1: E)



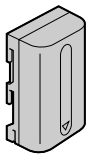
Lens cap (1)
X-2021-944-1



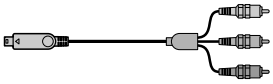
Lens hood (1)
X-2059-641-1



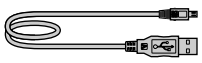
Shoulder Strap (1)
2-629-892-01



Rechargeable battery pack
NP-FM50 (1)
(not supplied)



Component video cable (1)
1-829-414-21

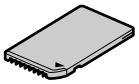


USB cable (1)
1-829-868-31

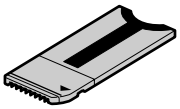
Wireless Remote Commander
RMT-831 (1)
1-478-495-41

A/V connecting cable (1)
1-823-156-51

Conversion 2P adaptor (1)
1-569-007-12
(HC1: E/HC1EK: JE/HC1K: JE)



Memory Stick Duo (1)
(not supplied)



Memory Stick Duo adaptor (1)
(not supplied)

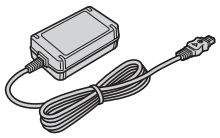
Other accessories

2-631-458-11 MANUAL, INSTRUCTION (ENGLISH) (HC1: US, CND, E/HC1K: JE)
2-631-458-21 MANUAL, INSTRUCTION (FRENCH) (HC1: CND)
2-631-458-31 MANUAL, INSTRUCTION (SPANISH) (HC1: E/HC1K: JE)
2-631-458-41 MANUAL, INSTRUCTION (PORTUGUESE) (HC1: E/HC1K: JE)
2-631-458-51 MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (HC1: E)
2-631-458-61 MANUAL, INSTRUCTION (KOREAN) (HC1: KR/HC1K: JE)
2-631-478-11 MANUAL, INSTRUCTION (ENGLISH) (HC1: AEP, UK, E, AUS/HC1EK: JE)
2-631-478-21 MANUAL, INSTRUCTION (FRENCH) (HC1: AEP)
2-631-478-31 MANUAL, INSTRUCTION (SPANISH) (HC1: AEP)
2-631-478-41 MANUAL, INSTRUCTION (PORTUGUESE) (HC1: AEP)
2-631-478-51 MANUAL, INSTRUCTION (ITALIAN) (HC1: AEP)
2-631-478-61 MANUAL, INSTRUCTION (GREEK) (HC1: AEP)
2-631-478-71 MANUAL, INSTRUCTION (GERMAN) (HC1: AEP)
2-631-478-81 MANUAL, INSTRUCTION (DUTCH) (HC1: AEP)
2-631-478-91 MANUAL, INSTRUCTION (SWEDISH) (HC1E: NE)
2-636-470-11 MANUAL, INSTRUCTION (RUSSIAN) (HC1E: HC1E: NE/HC1EK: JE)
2-636-470-21 MANUAL, INSTRUCTION (DANISH) (HC1E: NE)
2-636-470-31 MANUAL, INSTRUCTION (FINNISH) (HC1E: NE)
2-636-470-41 MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (HC1E: E/HC1EK: JE)

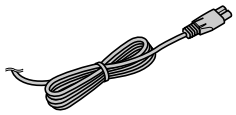
• Refer to page 5-1 for mark ⚠.

• J MODEL

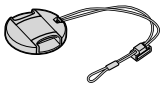
付属品



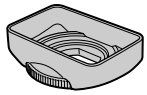
ACアダプター (1)
(AC-L15A/L15B)
⚠1-479-283-12



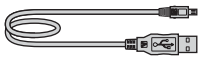
電源コード (1)
⚠ 1-790-732-71



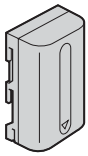
レンズキャップ (1)
X-2021-944-1



レンズフード (1)
X-2059-641-1



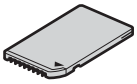
USBケーブル (1)
1-829-868-31



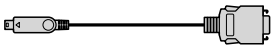
リチャージャブル
バッテリーパック (1)
NP-FM50

A/V接続ケーブル (1)
1-823-156-51

ワイヤレスリモコン (1)
RMT-831
1-478-495-31



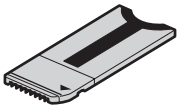
“メモリースティック　デュオ”
16MB (1)



D端子コンポーネント
ビデオケーブル (1)
1-829-414-11

図面
番号　　部品コード　部品名

2-631-458-01 取扱説明書

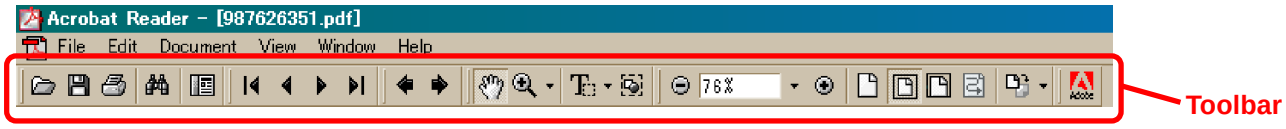


メモリースティック　デュオ
アダプター (1)

• ⚠マークについては，5-1ページを参照して下さい。

ENGLISH JAPANESE

[Description of main button functions on toolbar of the Adobe Acrobat Reader Ver5.0 (for Windows)]



Printing a text

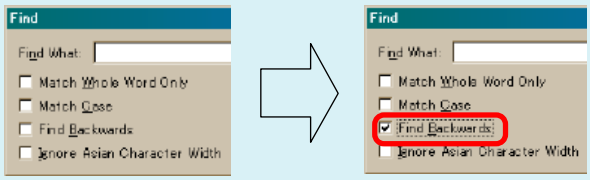
1. Click the Print button .
2. Specify a printer, print range, number of copies, and other options, and then click [OK].

Application of printing:
To set a range to be printed within a page, select the graphic selection tool and drag on the page to enclose a range to be printed, and then click the Print button.

Finding a text

1. Click the Find button .
2. Enter a character string to be found into a text box, and click the [Find]. (Specify the find options as necessary)

Application to the Service Manual:
To execute "find" from current page toward the previous pages, select the check box "Find Backward" and then click the "Find".



3. Open the find dialog box again, and click the [Find Again] and you can find the matched character strings displayed next. (Character strings entered previously are displayed as they are in the text box.)

Application to the Service Manual:
The parts on the drawing pages (block diagrams, circuit diagrams, printed circuit boards) and parts list pages in a text can be found using this find function. For example, find a Ref. No. of IC on the block diagram, and click the [Find Again] continuously, so that you can move to the Ref. No. of IC on the circuit diagram or printed circuit board diagram successively.
Note: The find function may not be applied to the Service Manual depending on the date of issue.

Switching a page

- To move to the first page, click the .
- To move to the last page, click the .
- To move to the previous page, click the .
- To move to the next page, click the .

Reversing the screens displayed once

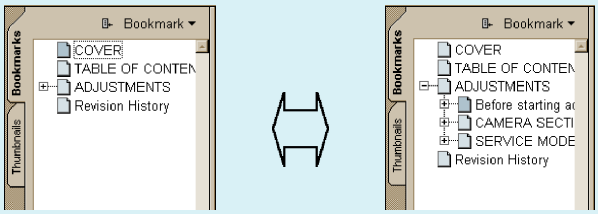
- To reverse the previous screens (operation) one by one, click the .
- To advance the reversed screens (operation) one by one, click the .

Application to the Service Manual:
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

Moving with link

1. Select either palm tool , zoom tool , text selection tool , or graphic selection tool .
2. Place the pointer in the position in a text where the link exists (such as a button on cover and the table of contents page, or blue characters on the removal flowchart page or drawing page), and the pointer will change to the forefinger form .
3. Then, click the link. (You will go to the link destination.)

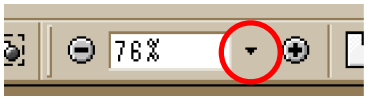
Moving with bookmark:
Click an item (text) on the bookmark pallet. and you can move to the link destination. Also, clicking can display the hidden items.
(To go back to original state, click)



Zooming or rotating the screen display

"Zoom in/out"

- Click the triangle button in the zoom control box to select the display magnification. Or, you may click or for zooming in or out.



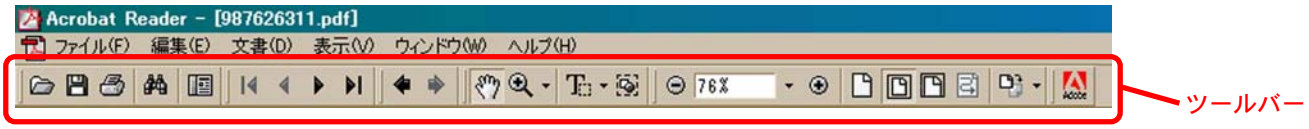
"Rotate"

- Click rotate tool , and the page then rotates 90 degrees each.

Application to the Service Manual:
The printed circuit board diagram you see now can be changed to the same direction as the set.

ENGLISH JAPANESE

【Adobe Acrobat Reader Ver 5.0(for Windows)ツールバー内にある主なボタンの機能説明】



文章を印刷する

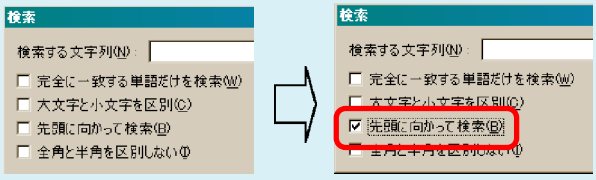
1. 印刷ボタンをクリックする。
2. プリンター、印刷範囲、印刷部数、および他のオプションを指定して「OK」をクリックする。

印刷の応用：
ページ内で印刷したい範囲を設定するには、グラフィック選択ツールを選択し、ページ上をドラッグして印刷したい範囲を囲んでから印刷ボタンをクリックする。

文章内を検索する

1. 検索ボタンをクリックする。
2. 検索したい文字列をテキストボックスに入力して「検索」をクリックする。(必要に応じて検索オプションを指定する)

サービスマニュアルへの応用：
現在のページから前ページに向かって検索する場合は「先頭に向かって検索」のチェックボックスを選択してから「検索」をクリックする。



3. 検索ダイアログボックスをもう一度開き、「次を検索」をクリックすると次に出てくる一致文字列を検索することができる。(前回入力した文字列が、テキストボックスにそのまま表示されている)

サービスマニュアルへの応用：
文章内にある図面ページ(ブロックダイヤグラム、回路図、プリント図)および部品表ページなどは、この検索機能を使って部品検索することができる。例えば、ブロックダイヤグラム上でICのRef. No.を検索し、「次を検索」を続けることによって回路図、プリント図上にあるICのRef. No.へ次々と移動する。
注意:発行年月日によって検索できない場合もあります。

ページを切り換える

- 最初のページに移動する場合、をクリックする。
- 最後のページに移動する場合、をクリックする。
- 前のページに移動する場合、をクリックする。
- 次のページに移動する場合、をクリックする。

一度表示した画面へ逆戻りする

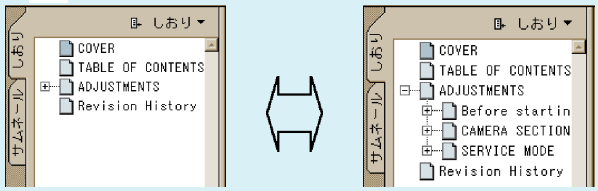
- 前の画面(操作)へ1つずつ逆戻りする場合、をクリックする。
- 戻した画面(操作)を1 つずつ前に進める場合、をクリックする。

サービスマニュアルへの応用：
回路図とプリント図を行き来できるので電圧チェックに便利です。

リンクを使用して移動する

1. 手のひらツール、ズームツール、テキスト選択ツール、グラフィック選択ツールのいずれかを選択する。
2. 文章内のリンクのある場所(表紙および章目次ページのボタン、外し方のフローページ、図面ページでは文字が青色になっているところなど)にポインタを置くと、ポインタが人差し指の形「」に変わる。
3. そのままリンクをクリックする。(リンク先へ移動する)

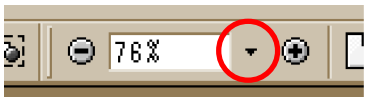
しおりを利用して移動する：
しおりパレット上の項目(テキスト)をクリックするとリンク先へ移動することができる。また、「」をクリックすると隠れている項目を表示することができる。
(「」をクリックすると元に戻る)



画面の表示を拡大、縮小または回転させる

「拡大/縮小」

- 倍率ボックスの三角矢印ボタンをクリックし、表示倍率を選択する。または、をクリックしても使えます。



「回転」

- 回転ツールをクリックすると、ページが90度ずつ回転する。

サービスマニュアルへの応用：
見ているプリント図をセットと同じ向きに変えられます。

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2005.06	Official Release	—	—